

A COMPUTABLE GENERAL EQUILIBRIUM MODEL FOR POVERTY MONITORING IN BANGLADESH

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1. INTRODUCTION

The paper discusses the specification of a computable general equilibrium (CGE) model developed to analyze the impact of various reform programmes being pursued by the government. More specifically, the model is developed with the aim to examine the distributional consequences as well to monitor the impacts on poverty due to adoption of structural adjustment programme and macroeconomic and stabilization policies.

Although a partial equilibrium framework can be used to analyze some of the issues of policy interest, the general equilibrium approach has clear advantages in dealing with multiple policy distortions in the economy. In recent years, computable general equilibrium models have been widely used to analyze resource allocation, income distribution and welfare consequences of trade and tax policy reforms, structural adjustments programmes and stabilization policies.

The present model belongs to Adelman and Robinson (1978) approach, which involves specification of a CGE model in terms of non-linear algebraic equations and addressing them directly with numerical solution techniques. The model generates solutions by simulating interactions among various economic actors such as producers, households, government, and corporations across different markets. Optimizing behaviour of individual actors is assumed and is incorporated in equations describing their behaviour. The SAM accounts prepared for 1992/93 provides the underlying database for the CGE model, with an income-expenditure account for each actor in the model.

The rest of the paper consists of three sections. Section 2 describes the structure of the model. Section 3 discusses the generation of parameter values through the use of calibration procedures. Concluding observations are presented in section 4.

2 THE MODEL STRUCTURE

2.1 PRODUCTION AND SUPPLY

The production structure is represented by a set of nested functions. Domestic output is a Cobb-Douglas function of value added and composite intermediate inputs. The production technology for the i th sector is described by the following equation:

$$X_i = AX_i \prod_i FD_i^{\alpha_{if}} \quad (1.1)$$

where, X_i is sectoral output. AX_i is the production function shift and α_{if} denotes share parameters. The composite intermediate input demand function is a fixed coefficient of output

$$INT_i = \sum_j IO(i, j) \cdot X_j \quad (1.2)$$

where, INT_i denote sectoral intermediate inputs, $IO(i, j)$ refers to input-output coefficient matrix.

Through profit maximisation with respect to (1.1), the factor demand functions are derived as:

$$FD_{if} = \frac{\alpha_{if} \cdot PV_i}{W_f \cdot \varpi_{if} \cdot X_i} \quad (1.3)$$

where, W_f is the average return of factor f and ϖ_{if} is a sector-specific parameter derived from base year data which captures the differential factor returns across sectors. This sector-specific parameter measures the extent to which the sectoral marginal revenue product of the factor deviates from the average return across the economy¹. As a consequence of such factor market distortions, the economy is

¹ This sector-specific parameters (ϖ_{if}) depicts the usual characteristics of the factor market in developing countries that factors belonging to the same category do not earn the same return in each sector. In the bench

presumed to operate inside the production possibility frontier thereby creating scope for changes in overall production even with full employment of factors (Dervis et al 1982).

2.2 PRICES

2.2.1 DOMESTIC PRICE OF IMPORTS

On the import side, the price-taker small-country assumption of classical trade theory is retained. This implies that the domestic price of imports, PM_i is determined exogenously and is linked to the world price in US dollars, \overline{PWM}_i by:

$$PM_i = \overline{PWM}_i \cdot ER \cdot (1 + tm_i + VAT_i) \quad (1.4)$$

where tm_i and st_i are the tariff and value-added on sector i and ER is the nominal exchange rate between US dollar and Bangladesh currency, Taka.

2.2.2 DOMESTIC PRICE OF EXPORTS

On the export side, Bangladesh is assumed to have some market power. In such a situation both the domestic price of exports and the world price of Bangladeshi exports are endogenous. The domestic price of exports is taken as a function of world price of exports PWE_i , and the nominal exchange rate, ER:

$$PE_i = PWE_i \cdot ER \quad (1.5)$$

The world price of Bangladeshi exports are determined by domestic production costs of exports, and the exchange rate policy. Following Dervis et al (1982), the

mark data, the total sectoral factor bill divided by the quantity of factor employed reveals that the factor returns are not equal across sectors for the same category. The difference between these factor returns is generally attributed to sector-specific features, assuming that they (i.e. sector-specific features) are a fixed fraction of the endogenous factor return in that category. Thus, the actual payment to factors in category f by sector i is $W_{if} = W_f \cdot \varpi_{if}$ where W_f is endogenous factor return and ϖ_{if} is the the sector-specific parameter derived from the base year data.

world price of Bangladeshi exports is estimated as $PWE_i = PE_i/ER$.

2.2.3 COMPOSITE PRICE

The composite or unit price is defined by the following equation²:

$$P_i = \frac{PD_i \cdot D_i + PM_i \cdot M_i}{Q_i} \quad (1.6)$$

where, D_i and M_i are the domestic and imported goods respectively. PD_i is the price of domestic goods.

2.2.4 SALES OR ACTIVITY PRICES

The sales or activity price is composed of domestic price of domestic sales and domestic price of exports activities;

$$PX_i = \frac{PD_i \cdot Di + PE_i \cdot E_i}{X_i} \quad (1.7)$$

where, td_i is the production or excise tax on sector i.

2.2.5 VALUE - ADDED PRICE

The value-added price is defined as:

$$PV_i = PX_i - \sum_j IO(i, j) \cdot PQ_j \cdot td_j \quad (1.8)$$

² Following the approach of Devarajan et al (1995), both the composite price and sales or activity price equations (e.g. 1.6 and 1.7) are specified as linear approximation of the dual price equations for the import aggregation (CES) and export transformation (CET) functions. Devarajan et al argue that although the dual price equations may be expressed as CES and CET forms, in practice it is often convenient to replace the dual price equations with expenditure identities, invoking Euler's theorem for linearly homogenous functions.

2.2.6 COMPOSITE CAPITAL GOODS PRICE

The composite capital goods price is defined as:

$$PK_i = \sum_j \kappa_{ji} \cdot P_j \quad (1.9)$$

where, κ_{ij} is a capital composition matrix.

2.2.7 PRICE INDEX

Aggregate Price Index is determined by the following equation

$$\text{PINDEX} = \frac{\text{GDPVA}}{\text{RGDP}} \quad (1.10)$$

Where PINDEX denote price index, GDPVA and RGDP refer to GDP value added and real GDP respectively. This index provides the numeric price level against which all relative price in the model will be measured. The choice of numeraire is necessary because CGE model can determine relative price only. The GDP or aggregate price index represents a convenient choice for the numeraire in an applied model since it is usually readily available from existing national accounts data.

2.3 TREATMENTS OF IMPORTS AND EXPORTS

2.3.1 IMPORTS

The specification of foreign trade and its interaction with the domestic economy provide one of the important characteristics of the model. In the *classical theory of international trade*, a traded good is assumed to be one for which (i) *the country is a price-taker* (i.e. the small-country assumption) and (ii) *the domestically produced goods is a perfect substitute for imported goods*. This specification leads to the results that the domestic price of a traded good is equal to its world price. Certain models

adhere to the framework of pure trade theory assuming perfect substitutability between domestic and imported goods (e.g. Taylor and Black 1974; and Clarete and Whalley 1988). This assumption implies that cross-hauling is ruled out and net trading status of a country is appropriately determined, commensurately reducing the revenues. *Secondly*, imports become a residual and except for the case of complete specialisation, there are no explicit import demand functions; rather there are demand functions for imported goods. *Thirdly*, since the domestic prices are determined completely by world prices, given the small country assumption, there is a tendency towards over-specialisation, a feature pointed out by Samuelson (1953) and later discussed by Travis (1972) and Malvin (1968). The over-specialisation problem arises because of the assumptions of constant returns to scale and perfect competition; perfect substitutability and small-country; and number of factors being less than number of traded goods. In such a situation, there are more price equations in the models than unknowns (factor prices) and overdetermination results. In the literature, the problem is tackled in several ways. Taylor and Black (1974) assume capital to be sector-specific, whereas Clarete and Whalley (1988) avoid this problem by bringing in a new set of sector-specific factors rather than fixing capital sectorally. Finally, when domestic and imported goods are perfect substitutes, the trade creation effects of trade policies tend to be larger than when products are imperfect substitutes.

On the other hand, a large part of the literature adopt a specification of imperfect substitutability between domestic and imported goods (Dervis et al, 1982, Devarajan et al, 1995). The models invoke the Armington (1969) assumption which *treats goods of the same type but different countries of origin as imperfect substitutes*. According to this assumption, each country produces a unique set of goods which, to a varying degree, are substitutes for, but not identical to goods produced in other countries. This has two advantages. *First*, it can accommodate cross-hauling in trade data. *Second*, it avoids the over-specialisation problem discussed earlier. According to Fretz, Srinivasan, and Whalley (1986) this is achieved by 'bounding the production response to trade policy changes from the demand side, since commodities subscribed by country are treated only as imperfect substitutes'. Since imported and domestic goods are only imperfect substitutes, a certain percentage change in the domestic price of imports due to, say a change in trade tax, leads to a smaller percentage change in the price of the domestically traded goods. Thus, dropping of the assumption of perfect substitution

between imports and domestic goods solves the specialisation problem noted above (de Melo 1987).

In the present model, the Armington specification is adopted since the perfect substitution assumption seems unrealistic in Bangladesh on at least two counts. *First*, there are quality differences between imports and domestic substitutes for most products. *Second*, at a high level of aggregation, each sector represents a bundle of different goods. For example, the machinery sector includes goods which are produced in Bangladesh (e.g., machine tools) and others (e.g., heavy machinery) which are not inter changeable. It is, therefore, reasonable to assume that these two goods are not perfect, rather imperfect, substitutes.

Thus for each commodity category an "aggregate" or composite commodity Q_i is defined, which is a CES function of imports M_i and domestic goods D_i . Domestic consumers are assumed to have a CES utility function over these two goods:

$$Q_i = A Q_i \cdot [\delta_i \cdot M_i^{-\rho_i} + (1 - \delta_i) \cdot D_i^{-\rho_i}]^{-1/\rho_i} \quad (1.11)$$

where, $A Q_i$ and δ_i are shift and share parameters respectively and σ_i , the elasticity of substitution is given by $\sigma_i = \frac{1}{1 + \rho_i}$. This formulation implies that consumers will choose a mix of M_i and D_i depending on their relative prices. Minimising the cost of obtaining a 'unit of utility', subject to (1.11) yields the following import demand function:

$$M_i = D_i \cdot \left[\frac{P D_i \cdot \delta_i}{P M_i \cdot (1 - \delta_i)} \right]^{\sigma_i} \quad (1.12)$$

As a result of this specification, PD_i is no longer equal to PM_i and PD_i is endogenously determined in the model³.

2.3.2 EXPORTS

2.3.2.1 EXPORTS DEMAND

Bangladesh is assumed to have some market power for its exports. This assumption is particularly relevant for traditional exports, such as jute and jute products, where Bangladeshi exports are significant in the world market creating some market power. For other sectors, Bangladesh may not have such market power. However, given the level of sectoral aggregation, it is difficult to identify sectors with and without market power. Thus, following Devarajan et al (1995) a downward sloping world demand curve for all exports is assumed. The export demand function can be shown as:

$$E_i = E_i^0 \cdot \left[\frac{PWE_i}{PWSE_i} \right]^{\eta_i} \quad (1.13)$$

where, E_i^0 is a constant, η_i is the price elasticity of export demand and $\overline{PWSE_i}$ is world price of goods which are close substitutes of Bangladeshi exports.

2.3.2.2 EXPORTS SUPPLY

A substantial part of the literature assumes that producers are indifferent between sales on domestic and export markets as long as they receive the same price. Thus there is no supply function for exports as such, but rather a supply function for domestic and exports as a whole, derived from production function (Drud et al 1983, Drud and Kendrick 1986). In such models, domestic and export market prices are identical before tax. As a consequence, the supply of exports may exhibit strong response to changes in domestic prices. When a domestic price rises, producers are induced to increase supply and consumers to reduce their demand. The net effect could result in a

³ Not only that this specification makes PD_i different from PM_i but it also allows for richer set of responses. Condon et al (1986), argued that "equation (1.12) allows for a richer set of responses, but as σ_i gets larger, the sensitivity of $\frac{M_i}{D_i}$ to changes in $\frac{PD_i}{PM_i}$ rises".

dramatic increase in exports (i.e. the difference between supply and domestic demand). However, in reality, exports may not rise so fast, since there may exist differences in quality of goods produced for exports and for home consumption. A classic example of such a phenomenon in Bangladesh is the ready made garments sector where there exists significant quality differences between garments produced for the domestic market and for exports. To capture this, following Dervis et al (1982), a constant elasticity of transformation (CET) function is postulated between domestically consumed goods D_i and exported goods E_i :

$$X_i = AT_i \cdot [\gamma_i \cdot E_i^{\phi_i} + (1 - \gamma_i) \cdot D_i^{\phi_i}]^{1/\phi_i} \quad (1.14)$$

where X_i is domestic output, AT_i and γ_i are constants and the elasticity of transformation is given by $\Psi_i = \frac{1}{1 - \Phi_i}$. Maximising revenue from a given output, subject to equation (3.14) yields the export supply function as:

$$E_i = D_i \cdot \left[\frac{PE_i \cdot (1 - \gamma_i)}{PD_i \cdot (1 - td_i) \cdot \gamma_i} \right]^{\psi_i} \quad (1.15)$$

Such a treatment of imports and exports in the model allows two-way trade (that is simultaneous exports and imports, known as cross-hauling) at the sectoral level, reflecting empirical realities in Bangladesh. Similar reasons led Condon et al (1986) to model the foreign trade regime of Cameroon on the basis of CES and CET specifications.

2.4 GENERATION OF INCOME OF THE INSTITUTIONS

2.4.1 HOUSEHOLD INCOME

There are several sources of income for households in the model. The main sources of household income are income from labour and capital. These primary factors (e.g., different types of labour and capital) earn income from their contributions to value

added. These factor incomes are in turn allocated to institutions who supply these primary factors. In this model, incomes from different labour categories are distributed across eight household groups according to an allocation matrix. However, not all the capital income accrues to households, as part of the capital income goes to the government and corporations according to their initial endowment of capital. Therefore, capital income is distributed to the six household groups, government and corporations on the basis of a specified allocation matrix. The allocation matrix is derived directly from the SAM data base and provides the crucial linkage between functional (i.e. factors) and institutional distribution of income. The household income from factors is specified as:

$$YF_h = \sum_f \Phi_{hf} \cdot Y_f \quad (1.16)$$

where, YF_h , Φ_{hf} and Y_f define household income from factors, the factors to households allocation matrix, and income by factors, respectively. The following equation is used to calculate factor income:

$$Y_f = \prod_i W_f \cdot \varpi_{if} \cdot FD_{if} \quad (1.17)$$

Besides factor incomes, the households also receive remittances from abroad, dividend income from corporations, direct transfers from government. The shares from all these sources are fixed in the benchmark level and thus relative shares do not change across simulations. Spendable income equation of household is specified as;

$$Y_h = [YF_h + \overline{RM}_h \cdot ER + \overline{DV}_h + \overline{GTR}_h] \cdot (1 - th_h - s_h) \quad (1.18)$$

where, \overline{RM}_h and \overline{GTR}_h are the shares of household income from remittances, dividends and government transfers respectively. Income tax rates and savings rates for different household groups are denoted by th_h and s_h respectively.

2.4.2 GOVERNMENT INCOME

Government derives income from all indirect and direct taxes and part of capital income to reflect the income generated from public sector corporations. The income equation has the form:

$$YG = \sum_h th_h \cdot Y_h + \sum_i tm_i \cdot \overline{PWM_i} \cdot M_i \cdot ER + \sum_i VAT_i \cdot \overline{PWM_i} \cdot M_i \cdot ER \\ + \sum_i td_i \cdot X_i \cdot PX_i + tc \cdot YC + YFG \quad (1.19)$$

where, t_c denotes the corporate tax rate. YFG shows government income from capital. This is endogenously derived as $YFG = \zeta_f \cdot Y_f$. Where, ζ_f is a scalar showing government share of income from capital.

2.4.3 CORPORATION INCOME

Corporations generate all their income from capital only. There are no other sources of income for the corporate institutions in the model. Corporation income is represented by the following equation:

$$YC = \chi_f \cdot Y_f \quad (1.20)$$

where, χ_f is a scalar showing corporation share of income from capital.

2.5 PRODUCT DEMAND

2.5.1 CONSUMPTION DEMAND

Total consumption demand is composed of private and government consumption. Consumption behaviour of each household is specified in the form of a representative

household (for each household group), maximising a Cobb-Douglas utility function subject to the budget constraint of the household:

$$U_h = \prod_i CD_i^{\beta_{ih}} \quad (1.21)$$

Maximization of utility function subject to the household income yields the following demand function.

$$CD_{in} = \frac{\beta_{ih} Y_h}{P_i} \quad (1.22)$$

Where CD_{in} is the consumption of goods i by household group h . Alternatively, consumption behaviour of each household can be specified in the form of a representative household (for each household group), maximizing a Stone-Geary utility function subject to the budget constraint of the household:

$$U_h = \prod_i (CD_{ih} - \varphi_{ih})^{\beta_{ih}} \quad (1.22a)$$

Maximisation of utility function subject to the household income yields a linear expenditure system of the form:

$$CD_{ih} = \varphi_{ih} + (\beta_{ih}/P_i) \cdot (Y_h - \sum_i \varphi_{ih} \cdot P_i) \quad (1.22b)$$

where, CD_{ih} is consumption of good i by household group h , φ_{ih} denotes floor or committed consumption of good i by household h and β_{ih} depicts the marginal budget share of good i by household h and $Y_h - \sum_i \varphi_{ih} \cdot P_i$ denotes supernumerary income of each household .

2.5.2 GOVERNMENT DEMAND

The government has its own utility function which is maximised given its income constraints. Assuming that government utility function is a Cobb-Douglas one government demand for commodity i is:

$$GD_i = \frac{B_i \cdot Y_{a_i}}{p a_i} \quad (1.23)$$

Alternatively, when total government expenditure is split between revenue expenditure (RE_i) and development expenditure (ADP_i) then the government utility function takes the form,

$$U_i^g = \Pi_i RE_i \beta_i^{RE} \cdot ADP_i (1 - \beta_i^{RE}) \quad \text{and}$$

for RE_i

$$RE_i = ADP_i \left[\frac{PADP_i (1 - \beta_i^{RE})}{PRE_i \cdot \beta_i^{RE}} \right]$$

2.5.3 INTERMEDIATE DEMAND

Since the shares among different intermediate inputs in a sector and the ratios of intermediate inputs to total outputs are fixed, one can write the demand for intermediate inputs as:

$$INT_i = \sum_j \tau_{ij} \cdot IN_j \quad (1.24)$$

where, τ_{ij} are input-output coefficients and IN_j are sectoral intermediate inputs.

2.5.4 INVESTMENT DEMAND

Total investment is always equal to savings in equilibrium. Total investment is composed of fixed capital formation and changes in stocks. Changes in stocks or inventory investment (DST) is determined in equation (1.25) using fixed shares of sectoral output (ξ_i):

$$DST_i = \xi_i \cdot X_i \quad (1.25)$$

Aggregate nominal fixed investment (FIXDINV) is calculated as total investment (I) less inventory investment.

$$FIXDINV = I - \sum_i PQ_i \cdot DST_i \quad (1.26)$$

Aggregate fixed investment is converted into real sectoral investment by sector of destination (DK) in equation (1.27) using fixed nominal share (λ_i), which sum to one over all sectors.

$$PK_i \cdot DK_i = \lambda_i \cdot FIXDINV \quad (1.27)$$

Investment by sector of destinations is then translated into demand for capital goods by sector of origin (ID_i), using a capital composition matrix κ_{ij} :

$$ID_i = \sum_j \kappa_{ij} \cdot DK_j \quad (1.28)$$

2.6 SAVINGS

Total savings is the sum of household, government, corporate and foreign savings. Households save a fixed proportion of their income. Following equations specify the savings behaviour of the households:

$$SH_h = s_h \cdot Y_h \quad (1.29)$$

The government savings is the difference between the endogenous government income and exogenous government expenditure and transfers to the household groups. The government savings is thus:

$$SG = YG - \sum_i \overline{GD_i} - \sum_h \overline{GTR_h} \quad (1.30)$$

Corporate savings is the difference between endogenous corporate income and corporate tax and dividend payments. The corporate savings is thus:

$$SC = YC - tc \cdot YC \quad (1.31)$$

The last component of aggregate savings is the foreign savings. Foreign savings is the difference between the value of imports and the value of exports, at world prices. The dollar value of foreign savings is then converted into savings in domestic currency using the relevant exchange rate. The aggregate or total savings is thus:

$$S = \sum_h SH_h + SG + SC + SF \cdot ER \quad (1.32)$$

2.7 GDP CALCULATION

Equation (1.33) and (1.34) define nominal and real GDP, which are used to calculate the GDP deflator specified as numeraire in the price equations. Real GDP (RGDP) is defined from the expenditure side, where imports are valued in world prices. Nominal GDP (GDPVA) is generated from the value added side.

$$GDPVA = \sum_i PV_i X_i + IND TAX + TARIFF \quad (1.33)$$

$$RGDP = \sum_i (CD_i + GD_i + ID_i + DST_i + E_i - PWM_i M_i ER) \quad (1.34)$$

2.8 EQUILIBRIUM CONDITIONS

2.8.1 FACTOR MARKET EQUILIBRIUM

Labour is generally considered a mobile factor in CGE models⁴. Almost all models also assume full employment of labour. In most models, labour supply is exogenously given and full employment is assured through the equality of labour demand and supply with average wage rates as the equilibrating variables. In certain models, unemployment of labour is assumed to examine issues relating to the labour market such as elimination of minimum wage rate (Devarajan et al 1995b) and rural-urban migration (Clarete and Whalley 1988).

Analogously, full employment of capital is assumed in all models. Since in most models capital is fixed sectorally, there is no separate market and hence a market clearing condition for capital is required. In certain models (Devarajan and Rodrick 1990 and Clarete and Whalley 1988) where capital is mobile between sectors, full employment of capital is assured when the demand for capital equals the fixed supply of capital.

Since issues relating to labour market are not explicitly examined in the present model, labour market is taken as simple and full employment of factors (e.g., labour and capital) is assumed. Thus, the factor market clearing condition requires that total factor demands equal exogenously fixed factor supplies and the equilibrating variables are the average factor prices (W_f).

⁴ One exception is the ORANI model of Australia (Dixon et al 1982), where a sector-specific labour is considered.

$$\sum_i FD_{if} - FS_f = 0 \quad (1.35)$$

All primary factors are assumed to be mobile across sectors; factor demands are determined by equation (1.4), and market clearing is achieved through changing factor prices (W_f) along with exogenous sector-specific parameters (ω_{if}). In fact, the factor mobility assumption is viewed here in the context of the time period of the model: the model may assume short or long run character according to the factor mobility assumption. In the long run, all primary factors (including capital) can be considered inter-sectorally mobile and market clearing is achieved through variation of factor prices. On the other hand, the model assumes short run character when capital stocks are fixed sectorally. This implies that capital demands are also fixed as total supply and demand for capital are always equal, hence no separate capital market closure is required.

2.8.2 、PRODUCT MARKET EQUILIBRIUM

$$Q_i = INT_i + \sum_h CD_{hi} + GD_i + ID_i \quad (1.36)$$

Equation (1.33) is the material balance equation for each sector, requiring that total composite supply (Q) is equal to the sum of composite demands. The equilibrating variables for equation (1.36) are sectoral prices. This adjusted market clearing condition implies that no separate market clearing condition is required for domestic output (X), since this involves adding exports to both sides of the equation (1.36).

2.8.3 BALANCE OF PAYMENTS

The balance of payment (BOP) equation is imposed to clear the foreign exchange market. The inflows are exogenous but imports and exports are determined endogenously in the model. Since nominal exchange rate is fixed in the model, foreign savings are allowed to vary to clear the foreign exchange market.

$$[\sum_i \overline{PWM_i} \cdot M_i] - [\sum_i PWE_i \cdot E_i + \sum_h \overline{RM_h} + SF] = 0 \quad (1.37)$$

Since the model takes government expenditure as fixed and as investment is also fixed exogenously, the model is 'investment driven'. The neutrality of government revenue is maintained by adjusting the indirect tax rates, so that government savings are not altered in different equilibria. In such a situation, changes in foreign savings are used to achieve the savings and investment balance. Changes in foreign savings are not likely to affect income and expenditures of government and household groups. Such a specification does not appear to influence the measurement of welfare under different equilibria⁵.

Alternative foreign exchange market closures are also available in the literature. One alternative is to fix foreign savings exogenously and allow the nominal exchange rate to vary. In such a case, the equilibrating variable is the nominal exchange rate. Equilibrium is achieved through the movement in the nominal exchange rate that affects import and export prices relative to domestic prices, i.e. by changing the relative price of tradables and nontradables (Devarajan et al 1995).

2.8.4 SAVINGS - INVESTMENT BALANCE

The final macro closure is achieved through the equality of endogenously determined aggregate savings and exogenously fixed total investment. Thus, this closure is "investment driven", in which total investment is fixed and the saving components are endogenous:

$$I = S = \sum_h SH_h + SG + SC + SF \cdot ER \quad (1.38)$$

⁵ Similar foreign exchange market closure is adopted by Devarajan and de Melo (1987) in a CGE model applicable to Franc-zone African countries. In the model, the local currency is pegged to the French Franc. Since both government expenditure and investment are fixed exogenously and tax rates are also fixed, the balance of trade or foreign savings is treated as an endogenous variable. In such a situation, any short fall in government budget and private savings are financed by foreign borrowing. If neutrality of government revenue is maintained, say by changing taxes, the effect will be to change foreign savings to equate aggregate savings and investment. It thus becomes the macro equilibrating variable that varies to equate savings and investment.

In applied general equilibrium models, only relative prices are determined. Thus it is necessary to normalise the price system. In the model, the nominal exchange rate is taken as the numeraire against which all relative prices are determined. In principle, it is possible to virtually normalise around any nominal magnitude since it has no effect on real variables. On the other hand, normalisation basically closes the system and allows one to solve the model for prices as a function of exogenous parameters and policy variables.

3 PARAMETERIZATION OF THE MODEL

Once the equilibrium data, as contained in the SAM, and the model structure are put in place, the next step is to specify the parameters of the model. The values of all parameters in the model are estimated using the given equilibrium data set (i.e. the SAM) as point estimates in combination with a literature search for key additional parameters such as elasticities of substitution between factors, elasticities of substitution between imports and domestic goods, elasticities of transformation between exports and domestic goods and price elasticities of demand for exports. Since these elasticities are not based on direct econometric estimation, sensitivity analysis has been carried out for the parameters as these are pivotal to the results. In fact, as Mansur and Whalley (1984) point out, it is not possible to define a likelihood function necessary to econometrically estimate the elasticities for a complete general equilibrium model. From the structure of the general equilibrium model, it is noted that the parameters for four different sets of functions need to be specified. These are the: (i) production function, (ii) value added function, (iii) CES substitution function and CET transformation function and (iv) export demand function.

3.1 PRODUCTION FUNCTION PARAMETERS

The production side of the model is specified by a Cobb-Douglas production function. In order to express numerically the sectoral production, it is necessary to determine the factor shares (α_{if}) in the production process. It is possible to obtain factor shares from the following equation:

$$\alpha_{if} = \frac{X_i}{FD_{if}} \quad (1.39)$$

The value X_i is given by base year SAM, assuming all prices to be unity in keeping with Harberger convention of decomposing value terms into prices and quantities, where the quantities are so defined that the prices are unity. The data for FD_{if} are obtained from the I-O table 1992/93. Once the values of α_{if} are obtained, AX_i can be determined from the production function (1.1);

$$AX_i = \frac{X_i}{\prod_l FD_{il}^{\alpha_{il}}} \quad (1.39a)$$

3.2 CES AND CET FUNCTION PARAMETERS

CES and CET functions are characterised by an elasticity of substitution (different from one), share parameters (sum to one), and a shift parameter. The share parameter of the CES function, δ_i can be obtained from the import demand function (1.12):

$$\delta_i = (PM_i/PD_i) \cdot (M_i/D_i)^{(1/\sigma_i)} \quad (1.40)$$

The values of M_i and D_i are available from the base year SAM. As already mentioned, following the Harberger convention, the relevant prices are set equal to one in the base year. For generating the values of δ_i 's, it is necessary to specify the sectoral elasticities of substitution. Again no studies have so far been conducted to estimate econometrically these values for Bangladesh. So these values are to be derived from secondary sources. To begin with, same values may be used to specify both the CES substitution and CET transformation elasticities.

Once the share parameters are determined, the shift parameters remain to be calibrated. The shift parameter can be calculated from the Armington function (1.11):

$$a_i^q = Q_i / [\delta_i M_i^{-\rho_i^q} + (1 - \delta_i) D_i^{-\rho_i^q}]^{-1/\rho_i^q} \quad (1.41)$$

The computation of share and shift parameters of the export supply (CET) function may follow a similar approach.

3.3 EXPORT DEMAND ELASTICITIES

The values of price elasticities of export demand are taken from a study which provides estimates of income and price elasticities of imports and exports of Bangladesh (Shilpi 1989). The study provides income and price elasticities for major exports items of Bangladesh and the elasticities are estimated for the period 1972-73 to 1986-87.

3.4 CONSUMPTION DEMAND PARAMETERS

3.4.1 CONSUMPTION DEMAND PARAMETERS FOR COBB – DOUGLAS SPECIFICATION

Consumption share parameters are determined using the specification of consumption demand (1.22) in the following form

$$\beta_{ih} = \frac{CD_{ih} \cdot P_i}{Y_h} \quad (1.42)$$

3.4.2 CONSUMPTION DEMAND PARAMETEERS FOR STONE – GEARY SPECIFICATION (ALTERNATIVE)

As indicated earlier, the household demand function is specified by a Stone-Geary Linear Expenditure System (LES). The LES is a complete set of consumer demand equations which is linear in total expenditures. The demand equation for each household group is given by:

$$CD_{ih} = \varphi_{ih} + (\beta_{ih}/P_i) \cdot (Y_h - \sum_i \varphi_{ih} \cdot P_i) \quad (1.43)$$

In the LES demand functions, two parameters are required to be estimated: (a) floor consumption levels (φ) and (b) marginal budget shares (β). The above parameters can be estimated in a number of ways although it is appropriate to estimate the parameters econometrically by using household expenditure data (Lluch, Powell and Williams 1977).

In Bangladesh, the 'Household Expenditure Survey' (HES) reports are published by the Bangladesh Bureau of Statistics (BBS). The survey reports income and expenditure patterns of the 'HES' income groups. It also provides information on income and expenditure patterns of urban and rural income groups. The information of the survey, however, is not sufficient to estimate the floor consumption levels of the household groups and marginal budget shares. For the present study, these parameters are computed, using the information of average budget shares, expenditure elasticities and the Frisch parameter (Frisch 1959).

Differentiation of equation (1.42) shows that the expenditure elasticities (Engel elasticity) are given by:

$$\mathcal{G}_{ih} = \frac{\beta_{ih} \cdot Y_h}{P_i \cdot CD_{ih}} = \frac{\beta_{ih}}{o_{ih}} \quad (1.44)$$

where, $o_{ih} = \frac{P_i \cdot CD_{ih}}{Y_h}$ is the average budget share of good i by household group h.

Since no econometric estimates for the expenditure elasticities are available in Bangladesh, the expenditure elasticities are estimated using the household expenditure data for 1988/89. Following Deaton and Case (1987) the expenditure elasticities are estimated as:

$$\mathcal{G}_i = 1 + b_i / Z_i \quad (1.45)$$

where, \mathcal{G}_i is total expenditure elasticity, Z_i is mean budget share and b_i is regression coefficient of per capita expenditure. The values of b_i coefficients may be obtained from the following equation:

$$Z_i^h = \alpha_i + b_i \cdot \ln PCE^h \quad (1.46)$$

where, PCE^h denotes per capita expenditure by household group h . It can also be assumed that the expenditure elasticities estimated for the I-O sectors are the same for the six household groups. Further manipulation of equation (1.43) yields the marginal budget shares as:

$$\beta_{ih} = o_{ih} \cdot \vartheta_{ih} \quad (1.47)$$

The imposition of Engel aggregation condition leads to:

$$\sum_i \beta_{ih} = \sum_i o_{ih} \cdot \vartheta_{ih} = 1 \quad (1.48)$$

The values of Frisch parameters are needed to estimate the floor consumption levels. The Frisch parameter measures the elasticity of marginal utility of expenditure with respect to expenditure. Lluch, Powell and Williams (1977) suggest an approximate relationship between Frisch parameter, $-\Theta$ and GNP per capita in 1970 U.S. dollars. The approximate relationship is depicted as $-\Theta \cong 36 \cdot PCY^{36}$. Following their approach, Frisch parameters for the major household groups ($-\Theta_h$) may be computed using the per capita income (PCY_h) of the six household groups. Given the values of Frisch parameter, average budget shares and estimated marginal budget shares, the values of floor consumption levels are computed using the following equation:

$$\varphi_{ih} = Y_h \cdot (o_{ih} + \beta_{ih} / \Theta_h \cdot P_i) \quad (1.49)$$

4. CLOSURE MECHANISMS IN CGE MODELS

The importance of the closure mechanism stems from the fact that the selection of the 'closure' serves to typify the entire model or the modules within it. Hence, it is crucial to decide on the closure for two main reasons. In the first place, in order to introduce

the definition equations in a consistent manner, and secondly, to be able to understand the way in which the model works.

There are several possibilities to define closures in CGE modelling, however, only some of the most relevant and frequently used will be described below. For convenience the closures are grouped into: neo-classical, Johansen, Fisherian, structuralist, Keynesian and Kaleckian.

The first set of model closures are of neo-classical type. They assume full utilisation of factors and output and income are determined mainly via the production side. It follows then, that disturbances of nominal macro balances may affect the sectoral composition of demand and hence sectoral production, however, these may have little or no impact in either aggregate output or on real income.

The second set, non-neo classical, assumes the existence of some degree of idle capacity, either in some or all sectors of the economy. In this case, prices have a more limited effect on the real side of the economy.

4.1 NEO-CLASSICAL CLOSURES

The most frequent assumptions underlying neo-classic theory of course underscore these type of closure, i.e. perfect competition, full factor mobility and full capacity utilization. Thus it stands to reason that the equilibrium assumptions of the neo-classical paradigm may become more applicable in the longer run.

Equilibrium means that prices adjust to clear markets, if factor mobility and some degree of substitution for demand and supply functions can be assumed to exist. Moreover, factor incomes depend on their marginal productivity.

In these models, prices are homogeneous of degree zero and hence the price level has no impact on the real side of the economy. Notwithstanding, as relative prices influence the real side, one of the prices must be selected as a unitary numeraire. The

most obvious contenders are either the GDP deflator (PGDP), the producer or consumer price index (CPI), the real exchange rate (RER), the wage rate or even the world price index of a particular commodity or basket of commodities.

As indicated above neo-classical closures assume total investment (I) as endogenously defined and equal to total savings (S). However, if foreign savings (S_f) are assumed to be exogenously determined the model becomes 'savings driven'. Furthermore, if no explicit mechanism to warrant the ex-post savings-investment equilibrium is introduced, the main adjustment must take place through changes in the price exogenously, then the price level cannot function as the numeraire of the model, and by default the NER must operate as the numeraire. However, it should of course be clear that changes in the price level affect the (RER).

4.1.1 JOHANSEN CLOSURE

The core assumption of the 'Johansen Closure' is that total investments (or some its components) are exogenously defined and that the adjustment between savings and consumption takes place endogenously. This closure works in opposite manner as the general neo-classical closure indicated above. Hence, the model is 'investment driven' instead and needs the explicit introduction of an equilibrating variable to guarantee the investment – savings balance. This can be done via the marginal propensity of consume ($mps = 1-s$ parameter) or alternatively foreign savings (S_f). It should be noted that an specified macro mechanism outside of the model must force aggregate consumption to be determined as a residual, and one obvious candidate is government expenditure.

4.1.2 FISHERIAN CLOSURE

This particular model closure defines both aggregate investment and savings functions explicitly. It then follows that the approach must include a specification of a well developed financial market in the model, where both savings and investments depend on a new equilibrating variable. Although, the model closure does not require the explicit inclusion of assets, its absence will certainly put pressure on assumptions which are based on the Walrasian equilibrium paradigm.

4.2 NON NEO-CLASSICAL CLOSURES

In contrast to the above described CGE macro closures, non-neoclassical closures are broadly referred to as structuralist or classical closures, which postulate the existence of institutional constraints, i.e. “unlimited supplies of labour”, supply rigidities, low domestic savings capacity and foreign savings constraints, resulting from inelastic supply and demand for exports. These type of models postulate the existence of strong links between the real and the nominal sides, that is changes in the composition of nominal macro aggregates affect both the level of aggregate output and employment as well as sectoral structure and not the other way round. It follows that prices do not work in the neoclassical fashion because of the mentioned institutional rigidities, in turn the mechanisms which lead to macroeconomic equilibrium are significantly different.

These kinds of models often introduce structural rigidities by assuming fixed nominal wage rates or government transfers and the existence of mark-up pricing due to supply constraints. Notwithstanding the fact that the rigidities are justified on account of short-run considerations, e.g. the macro equilibrium is based on short-run considerations, however, consistent with the nature of the rigidities, impact-analysis or shock effects are considered within the medium- (longer-) run context. In short, this approach ascribes medium-term developments as a sequence of short-run equilibria.

Structuralist CGE models in general assume non-homogeneity and a price Index (PI) as the numeraire. The PI must be interpreted as an aggregate price index which affects the real flows in the model.

4.2.1 KEYNESIAN CLOSURE

In CGE models with Keynesian closure, aggregate investment (or part of it) are assumed to be determined exogenously, that generates output or production activities and define their corresponding demand for labour. Hence, as nominal wage rates can be fixed exogenously, they can not work as the equilibrating variable in labour markets. In fact, since labour supply is assumed to always meet labour demand it can be dropped from the model. It follows that in this approach the underlying dichotomy between production, consumption and factorial distribution is lost, thus assumptions

about the mobility of capital can be dropped as well. In this case the sectoral capital stock (K_a) is fixed exogenously and there is no need for capital stock equations.

A further implication of the lack of factor mobility is that sectoral capital-rental rates are not the same across sectors, however, being endogenous, frustrate any effort to make them conform to any initial pattern of distortions embodied in the distribution parameters.

The adjustment which guarantees the saving – investment balance can be described as a process whereby an increase in exogenous investment takes place amid fixed savings rates. In such cases the levels of income and real output increase through the Keynesian multiplier and the equilibrium takes place at a higher level, e.g. where the necessary increase in savings which match the higher levels of investments are generated. Moreover, since firm or sector expansions are the ones that determine shifts in labour demand, this induces activities to hire additional labour. However, in the face of the assumption that the nominal wage is fixed, the aggregate price level becomes the equilibrating variable in labour markets. That is, increases in the aggregate price level reduce the real wage, inducing firms to hire more labour and to increase output, leading in turn to higher aggregate income and hence savings.

4.2.2 KEYNESIAN CLOSURE WITH LABOUR MARKET RATIONING

Notwithstanding, the main feature of CGE models with Keynesian closure, i.e. increases in aggregate output are always associated with a fall in real wages, it is possible to specify an alternative version by including simultaneously a rationing function for the labour market.

In this case, the Keynesian multiplier also drives the macro-equilibrium mechanism but – given spillover effects from the product market onto the labour market – increases in demand lead to the relaxation in rationing in product markets which becomes associated with rises in nominal and real wages. This effect can be obtained by defining the differential between the current average wage rate (w) and base wage rate (w_0) as a function of two differentials, namely between the current consumer price

index (CPI) and its base rate value (CPI_0) and the current unemployment rate (U_{lr}) and its base or “natural” rate level (U_{lr0}).

4.2.3 KALECKIAN CLOSURE

The Kaleckian closure is characterized by price and quantity adjustment that clear markets. It assumes that some commodity markets are cleared via price adjustments (flex-price whereby demand adjusts to a fixed or inelastic supply), while others are cleared by a quantity adjustment because there is no capacity constraint (fixed price whereby demand determines supply). In the latter case, prices are cost-determined and usually defined by mark-ups over a variable production cost to ensure an acceptable profit. These prices are not fixed, since price changes in the supply constrained sectors are transmitted via price changes of intermediate inputs to the demand constrained sectors, at the same time they are not flexible in response to variations in demand.

Prices in the supply constrained sectors are fully flexible, while those in the demand constrained sectors are set up via a mark-up rate on non-capital input costs, where the non-capital input cost is the labour-output coefficient. Alternatively, mark-up rates can be fixed or defined via mark-up response function in respect to increase in quantity supplied.

The Kaleckian closure, similar to the Keynesian one, assumes that in the face of exogenous aggregate investments savings adjust. In this case, the assumption about mobility of capital can be dropped also, as a result sectoral capital stocks become exogenous while the sectoral rental rates become endogenous. Consequently equilibrating variables in the factor's market are not needed, hence, the corresponding equations can be dropped.

Sectoral wages equations may include labour productivity growth rates, e.g. describing compensation for the productivity of labour. In addition, differences between the economy average wage and sectoral wage rates are assumed to be the result of different responses of the latter when prices and labour productivity increase.

The presentation about closures is by force very synthetic. It is mainly done to illustrate the intricacy of model closures and to provide a basis for scrutiny when deciding about the most appropriate.

5. CONCLUSION

This paper describes the specification of a computable general equilibrium model developed to examine distributional consequences as well as to analyse the effects on poverty situation due to adoption of structural adjustment programmes. The main features of the model are presented below:

- The model is fairly disaggregated. It has 35 production sectors, nine factors of production and eight household groups. The level of disaggregation tends to suggest that the model is particularly suitable to capture the distributional consequences of policy reforms let alone the efficiency aspects of policy reforms.
- The distributional aspects may be captured at least at two levels. On the supply side, this may be examined by observing changes in employment level, wage rates, rental rates of capital, and changes in relative incomes of various primary factors. On the other hand, in the demand side, the distributional effects may be attributable due to changes in household income, household consumption expenditures, changes in expenditure on education and health.
- Description of the model and availability of variables and instruments paved the way to adopt neoclassical and Keynesian types of model closure. The model can adopt : (a) a “neoclassical” closure where the investment function is dropped and set investment equals to available savings; (b) a “Keynesian” closure by dropping the full employment condition. On the other hand , other two types of model closures i.e. the “Johansen” and “Kaldorian” closures may not be suitable to adopt.

- The availability various fiscal instruments tend to indicate that the model suitable to examine various aspects of adjustment programmes e.g. tariff rationalisation, trade liberalisation, removal of subsidies, direct and indirect tax reforms.
- The model may also be used to examine the consequences of stabilisation programmes such as : reduction of public expenditure, devaluation of nominal exchange rate, reduction of domestic resource gap.
- The results obtained from the solution of the model may be used to study the impact of such programmes at the micro level. For instances the changes in the prices of essential food items and household incomes may be used to estimate the household demand for food and ultimately to examine their impact on nutritional levels of the household groups.
- Sensitivity analyses may also be carried out to check the robustness of the results emanated from the counterfactual exercises. This may be done at two levels either by altering the values of key parameters or elasticity or by changing the specification of some of the behavioural forms (e.g. government demand function or the consumption of the household groups).
- However the present model is not suitable to analyse the impact of the financial sectors reforms as no financial variables and agents are specified in the model. The model needs to be expanded to incorporate the behaviours of the financial agents to capture the consequences of the financial sector reforms.

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APPENDIX

DERIVATION OF A FORMULA FOR TOTAL EXPENDITURE ELASTICITY

This section discusses the derivation of a formula for total expenditure elasticity. According to Deaton (1981) the derivative of $\ln Z_i$ with respect to the logarithm of total expenditure is b_i/Z_i which, in turn, is the elasticity \mathcal{G}_i less unity. Thus, it is calculated as:

$$\mathcal{G}_i = \frac{b_i}{Z_i} + 1$$

To derive the total expenditure elasticity equation (1.45) is modified by replacing per capita expenditure with total expenditure. Hence the re-specified equation takes the following form⁶:

$$Z_i = a_i + b_i \ln TE \quad (\text{A.1})$$

Differentiation of Z_i with respect to $\ln TE$ yields b_i . However, the interest here is to derive a formula for expenditure elasticity. Thus, when $\ln Z_i$ is differentiated with respect to $\ln TE$, the following results:

$$\frac{\partial \ln Z_i}{\partial \ln TE} = \frac{\partial \ln Z_i}{\partial TX} \cdot \frac{\partial TX}{\partial \ln TE} = \frac{1}{Z_i} \cdot b_i = \frac{b_i}{Z_i} \quad (\text{A.2})$$

Deaton and Muellbauer (1980) argue that many economists consider the estimation of elasticities as the primary objective of empirical demand analysis. The following equation has frequently been estimated with time series data on expenditures, outlays and prices.

$$\log q_i = a_i + \mathcal{G}_i \log TE + \sum_k \mathcal{G}_{ik} \log p_k + u_i \quad (\text{A.3})$$

⁶ An important feature of this formulation is that, unlike most other empirical Engel curves, it satisfies the most obvious requirement of an allocation model that, if applied to all goods in the budget, its predicted budget shares add up to unity. From (A.1), this will happen if $\sum_i a_i$ and $\sum_i b_i$. Also note that for those goods with $b_i > 1$, the budget shares increases

where q_i is expenditure on goods i , TE is total expenditure and p_k is the price of goods k , ϑ_i and ϑ_{ik} denote total expenditure elasticities and price elasticities respectively. Estimates of ϑ_i and ϑ_{ik} can be obtained from ordinary least squares regression applied to equation (A.3). On the other hand, the logarithm of budget shares (e.g. $Z_i = p_i \cdot q_i / TE$) can be specified as:

$$\log Z_i = \log q_i + \log p_i - \log TE \quad (\text{A.4})$$

Now substitution of equation A.3 for $\log q_i$ in equation A.4 yields

$$\log Z_i = a_i + (\vartheta_i - 1) \log TE + (\vartheta_{ii} + 1) \log p_i + \sum_{k \neq i} \vartheta_{ik} \log p_k \quad (\text{A.5})$$

Differentiation of $\log Z_i$ with respect to $\log TE$ yields

$$\frac{\partial \log Z_i}{\partial \log TE} = \vartheta_i - 1 \quad (\text{A.6})$$

It is observed that left hand sides of equations A.1 and A.6 denote expressions for elasticities. Hence combining equations A.1 and A.6, the following formula for total expenditure elasticity can be obtained.

$$\vartheta_i = \frac{b_i}{Z_i} + 1$$

Where ϑ_i is total expenditure elasticity. Deaton and Case (1987) argue that these elasticities are not constant as Z_i and PCE vary, so that they are usually presented at the sample mean of Z_i , where predicted and actual budget shares coincide. The above elasticity formula also implies that, if ϑ_i is not unity, then it falls as PCE increases. This is simply an automatic feature of Engle curves like (1.45), and it may or may not be true in reality.

with expenditures, for those with $b_i < 1$, the share declines and when $b_i = 0$, the share is independent of expenditures. Hence, luxuries and necessities are naturally identified by the model (Deaton and Case 1987).

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THE HEART OF THE MATTER
SIERRA LEONE, DIAMONDS & HUMAN SECURITY
(COMPLETE REPORT)

Ian Smillie
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ACRONYMS

AFRC	Armed Forces Ruling Council
APC	All Peoples Congress
CAST	Consolidated African Selection Trust
CSO	Central Selling Organization
EO	Executive Outcomes
GGDO	Government Gold and Diamond Office
HRD	Hoge Raad voor Diamant (Diamond High Council)
NDMC	National Diamond Mining Company
NPFL	National Patriotic Front of Liberia
NPRC	National Provisional Ruling Council
OAU	Organization of African Unity
PMMC	Precious Metals Mining Company
RCMP	Royal Canadian Mounted Police
RUF	Revolutionary United Front
SLPP	Sierra leone People's Party
SLST	Sierra Leone Selection Trust
UNDP	United Nations Development Program
USGS	United States Geological Survey
VAT	Value Added Tax

"Oh, the diamonds, diamonds, diamonds," Yusef wearily complained. "I tell you, Major Scobie, that I make more money in one year from my smallest store than I would in three years from diamonds. You cannot understand how many bribes are necessary."

- Graham Greene, *The Heart of the Matter*, 1948

The diamond, a symbol of purity, makes a market that functions both above and below ground, in which the licit and the illicit mingle freely and comfortably, the line between them almost imperceptible, usually irrelevant. Diamonds bring out the worst in men---and women.

- David Koskoff, *The Diamond World*, 1981

Loot, not better government, has motivated the psychotically brutal guerrillas of Sierra Leone. They trade the diamonds they control for arms through neighbouring Liberia, under sponsorship of President Charles Taylor, their longtime patron.

- *New York Times*, Editorial, August 8, 1999.

FOREWORD

The processes of mining, trading and selling diamonds are myriad and byzantine; only those intimately involved in the industry truly comprehend its vagaries.

Sierra Leone has one of the richest mother lodes of diamonds in the world. Over the years, the ramifications of diamond extraction in Sierra Leone have intrigued the international community, spawning numerous articles and books, from Graham Greene's *The Heart of the Matter*, to Robert Kaplan's *The Ends of the Earth*.

But more recently, Sierra Leone has intruded on the world's attention for other reasons. The recurring conflicts and brutality; the uprooting of fully half of its people, the mutilation and murder of its children have shocked even the most hardened observers. And many are asking:

How can peace and stability be restored in Sierra Leone? Is there a connection between the illicit diamond trade and the mayhem that has disfigured Sierra Leone in recent years? What can the international community do to assuage the trauma of conflict in Sierra Leone? These are the questions this study seeks to address.

Too often in the past the powers of the North have felt compelled to help resolve tensions in countries with which they felt some compatibility, while ignoring similar struggles in countries of the South. One has only to contrast the attention accorded the conflict in Bosnia with what was given Rwanda; or of Kosovo with Sierra Leone. The eight million refugees and internally displaced persons throughout Africa are symptomatic of this lack of concern. Root causes of conflict in Africa are ignored. The authors of this report are to be commended for their investigation. In reading their report, I can only conclude that greed and corruption - local, regional and global in scope - have encompassed Sierra Leone's diamond industry, and are the root cause of a conflict too long ignored.

Hon. Flora MacDonald, C.C.
Ottawa, January 2000

PREFACE

This study grew from a discussion in 1998 among members of an informal group in Ottawa called the 'Sierra Leone Working Group' (SLWG). Meeting under the auspices of the Canadian and African NGO coalition, Partnership Africa Canada (PAC), the SLWG has helped to raise Canadian awareness about the conflict in Sierra Leone, it has raised funds for peacebuilding and emergency relief in Sierra Leone, and it has encouraged senior Canadian government officials to take a greater interest in the broader political and economic aspects of the conflict. The group concluded in 1998 that diamonds were central to the conflict, and that a highly criminalized war economy had developed a momentum of its own. The group believed that regardless of what might be done to bring about a peaceful settlement, no peace agreement would be sustainable until the problems related to mining and selling diamonds had been addressed, both inside Sierra Leone and internationally.

The Sierra Leone Working Group requested financial support for this study from a variety of organizations with interests in Sierra Leone specifically, or with an interest in the broader issues surrounding extractive industries and war. Supporters include the Canadian Catholic Organization for Development and Peace, the Canadian Auto Workers' Social Justice Fund, Canadian Feed the Children, the Centre canadien d'étude et de coopération internationale, the Commonwealth Human Rights Initiative, CUSO, Inter Pares and the Steelworkers Humanity Fund. Five additional institutional donors in Canada and Britain wished to remain anonymous. The study was also generously supported by the Peacebuilding Division of the Canadian Department of Foreign Affairs and International Trade and the International Development Research Centre. To all of them we are very grateful. Although much of the funding was Canadian, the study's subject matter is international. The only point of particular reference to Canada is the distinctive role of Canadian stock exchanges and certain 'Canadian' mining companies that are active in Sierra Leone.

The study was conducted between February and December 1999. Core team members were Ian Smillie, Lansana Gberie and Ralph Hazleton. Members of the core team traveled extensively in Europe, North America and West Africa. Belgian research was conducted with the valuable assistance of Johan Peleman of the International Peace Information Service in Antwerp, and assistance was provided in Sierra Leone by Mohamed Swaray.

Many individuals, organizations, companies and government officials - in Sierra Leone, Britain, Belgium, Canada and the United States - assisted in the preparation of this study and were generous with their time and their knowledge. Special thanks is due to the Government of Sierra Leone, the Royal Canadian Mounted Police, Global Witness, the Diamond High Council, and several companies in the diamond industry, including De Beers and AmCan Minerals. Individuals who assisted in many ways include Bonnie Campbell, Terry Copp, Caspar Fithen, Frances Fortune, Howard Goldenpaul, Kingsley Lington, Hon. Flora MacDonald, Doug Paget of Indian and Northern Affairs Canada, David Pratt, Nicola Reindorp, David Tam-Baryoh, long-time Sierra Leone-watcher William Reno, Jim Rupert, Dr. Julius Spencer, Minister of Information, Sierra Leone, and Thomas Turay. Special thanks to Helen Moore. Without the continuing assistance of Bernard Taylor and PAC, the study would not have been possible. Many officials, journalists, miners, traders, dealers, couriers and smugglers - especially in Sierra Leone and Belgium - spoke to the Project Team on the condition of anonymity. The reasons for this will become apparent in the text, however efforts were made to corroborate any information used in the report from 'off-the-record' sources. To them as well, a vote of thanks is very much in order.

A list of those who were consulted 'on the record' is included in an appendix. It is important to note, however, that the entire report, its recommendations and any errors or omissions are those of the authors alone.

EXECUTIVE SUMMARY

This study is about how diamonds - small pieces of carbon with no great intrinsic value - have been the cause of widespread death, destruction and misery for almost a decade in the small West African country of Sierra Leone. Through the 1990s, Sierra Leone's rebel war became a tragedy of major humanitarian, political and historic proportions, but the story goes back further - almost 60 years, to the discovery of the diamonds. The diamonds are, to use the title of Graham Greene's classic 1948 novel about the Sierra Leone, *The Heart of the Matter*.

A weak post-independence democracy was subverted in the 1960s and 1970s by corruption and despotism. Economic decline and military rule followed. The rebellion that began in 1991 was characterized by banditry and horrific brutality, wreaked primarily on civilians. Between 1991 and 1999, the war claimed over 75,000 lives, caused half a million Sierra Leoneans to become refugees, and displaced half of the country's 4.5 million people.

There is a view that Sierra Leone's war is a crisis of modernity, caused by the failed patrimonial systems of successive post-colonial governments. Sierra Leonean writers have rejected this analysis on several grounds. While there is no doubt about widespread public disenchantment with the failing state, with corruption and with a lack of opportunity, similar problems elsewhere have not led to years of brutality by forces devoid of ideology, political support and ethnic identity. Only the *economic* opportunity presented by a breakdown in law and order could sustain violence at the levels that have plagued Sierra Leone since 1991.

This study constitutes a strong critique of prevailing orthodox explanations of conflict, which tend towards state-centric and non-economic explanations. Traditional economics, in fact, as well as traditional political science and military history are of little assistance in explaining Sierra Leone's conflict. The point of the war may not actually have been to win it, but to engage in profitable crime under the cover of warfare. Diamonds, in fact, have fueled Sierra Leone's conflict, destabilizing the country for the better part of three decades, stealing its patrimony and robbing an entire generation of children, putting the country dead last on the UNDP Human Development Index.

Over the years, the informal diamond mining sector, long dominated by what might be called 'disorganized crime', became increasingly influenced by *organized* crime and by the transcontinental smuggling not just of diamonds, but of guns and drugs, and by vast sums of money in search of a laundry. Violence became central to the advancement of those with vested interests. As the mutation of the war in Sierra Leone continued through the 1990s, so did the number and type of predators, each seeking to gain from one side of the conflict or another.

The Diamond Industry and De Beers

In 1998 the diamond industry produced an estimated 115 million carats of rough diamonds with a market value of US \$6.7 billion. At the end of the diamond chain, this was converted into 67.1 million pieces of jewelry worth close to US \$50 billion.

The De Beers group of companies mines or partners in mining the majority of the world's diamonds. De Beers purchases by far the majority of all diamonds produced, and more or less sets the price of rough diamonds on the global market. Manipulation of both the supply and demand for

rough diamonds on world markets is managed through its Central Selling Organization (CSO), headquartered in London.

The CSO sources diamonds from De Beers mines as well as from the 'outside market' - diamonds produced by non-De Beers firms. Diamonds purchased by the CSO are in turn sold at ten annual 'sights' (sales) to 160 'sightholders'. Sightholders are designated by De Beers and are presented with mixed 'parcels' of diamonds. The parcels are packages of combined rough gem quality and industrial diamonds, and may include stones from a combination of countries. Parcels are priced by De Beers and are bought by sightholders - ironically enough, sight unseen. Sightholders then take the diamonds to other cities where they are resorted and repackaged for onward sale, or for cutting and polishing.

Until the 1980s, De Beers was directly involved in Sierra Leone, had concessions to mine diamonds offshore, and maintained an office in Freetown. Since then, however, the relationship has been indirect. De Beers maintains a diamond trading company in Liberia and a buying office in Conakry, Guinea. Both countries produce very few diamonds themselves, and Liberia is widely understood to be a 'transit' country for smuggled diamonds. Many 'Liberian' diamonds are of Sierra Leonean origin, and others reportedly originate as far away as Russia and Angola. De Beers says that it does not purchase Sierra Leonean diamonds. Through its companies in West Africa, however, and in its attempts to mop up supplies everywhere in the world, it is virtually inconceivable that the company is not - in one way or another - purchasing diamonds that have been smuggled out of Sierra Leone.

Belgium and the Diamond High Council

Antwerp is the world centre for rough diamonds. More than half of the CSO sightholders reside in Antwerp. Antwerp is also the principal 'outside market' serving as a funnel for more than half of all the diamonds produced in the world. The formal trading of diamonds in Belgium is structured around the *Hoge Raad voor Diamant* (HRD) - the Diamond High Council. The HRD is a non-profit umbrella organization officially acknowledged as the voice of the entire Belgian diamond industry. The mission of the HRD is to maintain and strengthen the position of Antwerp as the world centre for diamonds.

Smuggling in the Belgian context refers to diamonds which enter Belgium without being declared to customs officials, and which are not licensed for import by the Ministry of Economic Affairs and the HRD Diamond Office. Neither the Government of Belgium nor the HRD have estimates of the quantity or source of smuggled diamonds. In addition, there are few active policies aimed at controlling diamond smuggling.

A factor which eases large-scale diamond smuggling and inhibits the tracking of diamond movements is the manner in which the HRD documents diamond purchases. The HRD records the origin of a diamond as the country from which the diamond was last exported. Therefore diamonds produced in Sierra Leone, say, may be officially imported and registered as originating in Liberia, Guinea (Conakry), Israel or the UK, depending on their journey from one trading centre to another.

A major problem with the Belgian environment, as it pertains to Sierra Leone or any other diamond producing country, is the lack of interest and information on the true source of the diamonds entering the country. A comparison of West African diamond export figures with Belgian imports is revealing. For example:

- while the Government of Sierra Leone recorded exports of only 8,500 carats in 1998, the HRD records imports of 770,000 carats;
- annual Liberian diamond mining capacity is between 100,000 and 150,000 carats, but the HRD records Liberian imports into Belgium of over 31 *million* carats between 1994 and 1998 - an average of over six million carats a year;
- Ivory Coast, where the small diamond industry was closed in the mid 1980s, apparently exported an average of more than 1.5 million carats to Belgium between 1995 and 1997.

Of further interest where transparency and accountability are concerned, is the question of who actually monitors imports and exports on behalf of the Belgian government. Oddly, this role is carried out largely by the HRD itself, the representative and lobbying institution for the Belgian diamond industry. In recent years there have been a number of judicial inquiries which have shown that the overall system violates almost any definition of neutrality, and is an invitation to corruption. Cases of fraud in the Antwerp diamond and banking trade are legendary and Antwerp has become one of the primary world centres for Russian organized crime. Several recent cases of fraud, banking collapse and the involvement of organized crime in the Belgian diamond industry are documented in the report.

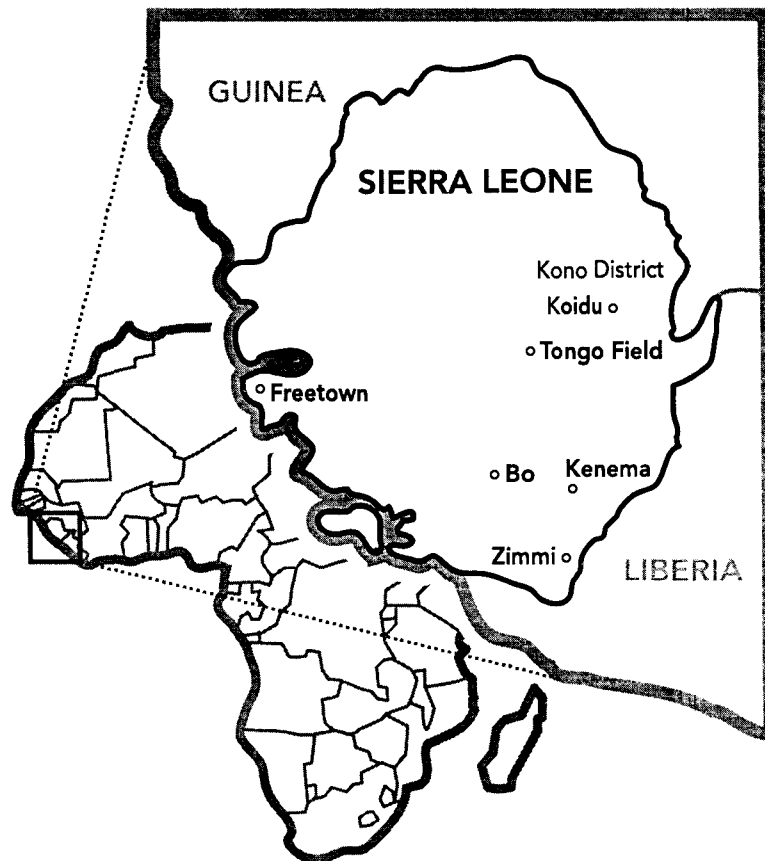
The Sierra Leone Diamonds

The first Sierra Leonean diamond was found in 1930, and significant production commenced in 1935. By 1937 Sierra Leone was mining one million carats annually, reaching a peak of 2 million carats in 1960. From 1930 to 1998, approximately 55 million carats were mined (officially) in Sierra Leone. At an average price in 1996 dollars of US \$270 per carat, the total value is close to US \$15 billion.

In 1935, the colonial authorities concluded an agreement with De Beers' Sierra Leone Selection Trust (SLST), giving the company exclusive mining and prospecting rights over the entire country for 99 years. By 1956, however, there were an estimated 75,000 illicit miners in Kono District - the heart of the diamond area - leading to smuggling on a vast scale, and causing a general breakdown of law and order. The buyers and smugglers at that time were mainly Madingo and Lebanese traders. With the tightening of security between Kono and Freetown in the early 1950s, Lebanese smugglers began moving their goods to Liberia. Antwerp, and then Israeli-based diamond merchants soon noticed the booming diamond trade in Monrovia, and many established offices there. De Beers itself set up a buying office in Monrovia in 1954 to keep as much of the trade under its control as possible.

In 1955, the colonial authorities scrapped SLST's nation-wide monopoly, confining its operations to Yengema and Tongo Field, an area of about 450 square miles. In 1956, they introduced the Alluvial Mining Scheme, under which both mining and buying licenses were granted to indigenous miners. Many of these licenses came to be held by Lebanese traders who had begun to settle in Sierra Leone at the turn of the century.

Siaka Stevens came to power seven years after independence in 1968. A populist, he quickly turned diamonds and the presence of SLST into a political issue, tacitly encouraging illicit mining, and becoming involved himself in criminal or near-criminal activities. In 1971, Stevens created the National Diamond Mining Company (NDMC) which effectively nationalised SLST. All important



decisions were now made by the prime minister and his right hand man, a Lebanese businessman named Jamil Mohammed. From a high of over two million carats in 1970, legitimate diamond exports dropped to 595,000 carats in 1980 and then to only 48,000 in 1988. In 1984, SLST sold its remaining shares to the Precious Metals Mining Company (PMMC), a company controlled by Jamil. Stevens retired in 1985, handing over power to Joseph Momoh, who placed even greater responsibility in the hands of Jamil.

From the late 1970s to the early 1990s, aspects of Lebanon's civil war were played out in miniature in Sierra Leone. Various Lebanese militia sought financial assistance from their compatriots in Sierra Leone, and the country's diamonds became an important informal tax base for one faction or the other. This was of great interest to Israel, in part because the leader of the important Amal faction, Nabih Berri, had been born in Sierra Leone and was a boyhood friend of Jamil. Following a failed (and probably phoney) 1987 coup attempt in Sierra Leone, Jamil went into exile, opening the way for a number of Israeli 'investors' with close connections to Russian and American crime families, and with ties to the Antwerp diamond trade.

The Revolutionary United Front (RUF) war began in 1991 and soon after, Momoh was replaced by a military government - the National Provisional Ruling Council (NPRC). Despite the change in government, however, RUF attacks continued. From the outset of the war, Liberia acted as banker, trainer and mentor to the RUF, although the Liberian connection was hardly new. With

a negligible diamond potential of its own, Liberia's dealings in stolen Sierra Leone diamonds have been a major concern to successive Sierra Leone governments since the great diamond rush of the 1950s.

What was different and more sinister after 1991 was the active involvement of *official* Liberian interests in Sierra Leone's brutal war - for the purpose of pillage rather than politics. By the end of the 1990s, Liberia had become a major centre for massive diamond-related criminal activity, with connections to guns, drugs and money laundering throughout Africa and considerably further afield. In return for weapons, it provided the RUF with an outlet for diamonds, and has done the same for other diamond producing countries, fuelling war and providing a safe haven for organized crime of all sorts.

The 'Juniors' and Private Security Firms

Joseph Momoh's search for new investors in the early 1990s was carried forward by the NPRC military government. With De Beers out of the picture, and with the disappointing and short-lived Israeli experience behind it, the government now began to receive overtures from small mining firms, known in the business as 'juniors'. The report deals primarily with the three juniors most involved in Sierra Leone during the 1990s, some with interests that extended far beyond the mining of diamonds.

All three trade on Canadian stock exchanges, no doubt because of Canada's well-deserved reputation as a source of easy venture capital for small mining and exploration companies. The first, Rex Diamond - with de facto headquarters in Antwerp - has an integrated mining, sorting, cutting and marketing operation, holding Sierra Leonean concessions in Zimmi and Tongo Field. Although Rex claims friends among both government and the RUF, this is denied by the RUF, perhaps understandably. In 1998, Sierra Leone lost its only combat helicopter - a serious problem because the Soviet-built gunship had been the government's most effective weapon against the RUF. Zeev Morgenstern, Rex's Managing Director, and Serge Muller, the company's President, came to the government's aid by making an arrangement to supply engines, parts and ammunition worth US \$3.8 million. The deal went sour as a result of defective parts supplied from Russia. According to the *Washington Post*, Morgenstern and Muller have both said, '...the arms deals were unrelated to Rex's mining activities'.

The second firm is Toronto-based AmCan Minerals, which holds various exploration licenses in Sierra Leone. Because of the security situation, AmCan has so far done little diamond mining, although it recently acquired a South African-owned firm, ArmSec International (SL) with connections to both the diamond and the security industries. AmCan's Sierra Leone lawyer is Chairman of the Government Gold and Diamond Office, the body responsible for overseeing the monitoring, valuation and taxation of the diamond industry.

The third 'Canadian' firm is DiamondWorks, an outgrowth of Carson Gold and Vengold, companies promoted by Robert and Eric Friedland. In 1995, DiamondWorks acquired Branch Energy Ltd., a private company registered on the Isle of Man. DiamondWorks and Branch Energy have become the subject of widespread interest because of their apparent but much-denied connections with two major international security firms, Executive Outcomes and Sandline. In 1995, The Government of Sierra Leone, backed onto the Freetown peninsula by the RUF and facing certain defeat, engaged the services of Executive Outcomes (EO) to help in its defense. With 200 imported

soldiers, air support, and sophisticated communications equipment, EO pushed the RUF back from Freetown within a week, and within another month had cleared the major diamond areas of Kono as well. Shortly after EO took control of the diamond areas, Branch Energy - which had introduced EO to the GOSL - secured a 25 year lease on Sierra Leonean diamond concessions.

In 1997, DiamondWorks' Sierra Leone country manager was seconded - as a 'private citizen' - to Sandline, in connection with a controversial arms shipment intended for the briefly exiled government of Tejan Kabbah.

The juniors arrived in Sierra Leone when the formal instruments of the state had all but disappeared, notably law, order, probity and justice. They also arrived in the midst of a war which had at its epicentre the same thing that brought them to the country - diamonds. Lawlessness, however, was not new. The government of Sierra Leone had - from the 1950s - given up pretending that it could police the diamond areas. From the days of the SLST Diamond Protection Force, it had encouraged and even required foreign investors to make their own security arrangements. This goes a long way to explaining why the juniors appear to have such an intimate relationship with private security firms.

There is a distinction to be made, however, between the need to hire a private security firm in order to police a mining operation, and the provision of troops and weapons in support of a faction in a civil war. It can be said that the involvement of Executive Outcomes in Sierra Leone was in a good cause. The company successfully protected the government against a brutal and illegitimate rebel force. EO was certainly cheered in the streets of Freetown for its efforts. It can also be said that the provision of weapons to the democratically elected government of Tejan Kabbah - a UN arms embargo notwithstanding - made sense and was in support of a good cause.

The problem is not the individual episodes, but the bigger picture which they help to form - of a world in which beleaguered and legitimate governments find little formal international protection against internal predators, and are forced into Faustian bargains in order to survive.

Conclusions

In the absence of a governmental capacity for self-protection, and in the absence of effective mechanisms for international protection, private security firms and mercenaries may well be the way of the future. Closely connected to mining interests, the phenomenon, however, is more than just a convenient way to let the international community 'off the hook'. It begins to look like a protection racket, with the payment for assistance made in future mineral concessions - 'concessions for protection'.

It is unclear whether junior mining companies have the capacity to undertake serious mining ventures in Sierra Leone. Only time and peace will tell. On the latter point, however, a peace agreement is only one step in a long process that will be required to provide real security in the diamond areas. An important next step will be the demobilization of fighters and a return to the rule of law under government authority. Before government authority can be established, however, there may be a lengthy interregnum required for UN peacekeeping forces.

The report concludes with a discussion on the identification of rough diamonds, an issue of great interest to law enforcement agencies. Long thought to be impossible, new diamond 'fingerprinting' technology is being developed in consultation with the Royal Canadian Mounted

Police. The RCMP stresses that it has yet to clearly identify the limitations and capabilities of the system through actual use. The potential difficulties in applying the technology are reduced, however, by the fact that the bulk of the rough diamond trade is centralized in only two organizations and two locations, the HRD in Antwerp and De Beers' Central Selling Organization in London.

The report ends with a series of recommendations directed to the United Nations, The European Union, the Governments of Sierra Leone and Belgium, the Diamond High Council and others. It also argues that a consumer campaign may be required in order to draw attention to the urgency of the matter and to gain broad public support for change.

1. INTRODUCTION

1.1 Background to the War

Through the 1990s, the war in Sierra Leone became a tragedy of major humanitarian, political and historical proportions. Sierra Leone is Africa's first modern state, founded by black Nova Scotians over 200 years ago and home to sub Saharan Africa's first university. A weak post-independence democracy was subverted in the 1960s and 1970s by corruption and despotism. Economic decline and military rule followed. A rebellion which began in 1991 was characterized by banditry and horrific brutality, wreaked primarily on civilians. Attempts to improve governance in the 1990s, and in particular since 1996, have been inadequate. International support which might have made a difference at key moments, especially since 1996, has also been inadequate. Between 1991 and 1999, the war took over 75,000 lives, caused half a million Sierra Leoneans to become refugees, and has displaced half of the country's 4.5 million people. A peace accord between the government and the Revolutionary United Front (RUF) was signed in July 1999, and in October 1999, a 6000-member United Nations Peacekeeping Force was approved by the Security Council as a complement to the West African Peacekeeping Force (ECOMOG) that had supported the government through the latter half of the 1990s. (For details, see Box 1)

1.2 Why the Issue is Important: Murder, Terror, Theft

The issues arising from Sierra Leone's lengthy and brutal conflict have ramifications that extend well beyond the country's borders. Inside Sierra Leone, diamonds have fueled a conflict that has destabilized the country for the better part of a decade. Seventy five thousand people - most of them civilians - have lost their lives. Rebel butchery has left thousands of women, men and children without hands and feet, disfigured physically and psychologically for life. At different times during the crisis, as many as half of Sierra Leone's population - more than the entire population of Kosovo - became displaced or were refugees. Schools, hospitals, government services and normal commerce ground to a halt in all but the largest urban centres. Mineral resources which should have been available for development were used to finance the war, robbing the potential beneficiaries and an entire generation of children, putting Sierra Leone very last on the UNDP Human Development Index.

The issue is also important because the economic fuel for this enormous human tragedy is almost exclusively derived from diamonds, small bits of carbon that have no intrinsic value in themselves, and no value whatsoever to the average Sierra Leonean beyond their attraction to outsiders. It is ironic that enormous profits have been made from diamonds throughout the conflict, but the only effect on the citizens of the country where they are mined has been terror, murder, dismemberment and poverty. At the far end of the diamond chain, in the retail jewelry stores of Europe, North America and Japan, diamonds are purchased as emblems of wealth, or as symbols of love and affection, to commemorate weddings and anniversaries. Many of these diamonds that make their way through London, Antwerp, Tel Aviv, New York and elsewhere are of Sierra Leonean origin and most of them over the past decade have been stolen. The chain between the teen-aged boy who mines a diamond and the individual who wears a diamond ring is complex, but it is traceable. Many

governments, reputable companies and international agencies participate one way or another in, and benefit enormously from, the theft.

Sierra Leoneans are not alone in seeing their country, their lives and their families destroyed for diamonds; the Angolan situation is equally horrific, and there are similar diamond-related tragedies in Liberia and Congo. It is estimated that various African rebel groups supply as much as 20 per cent of the world's diamonds to the global market.¹ This report will examine how the theft of Sierra Leone's diamonds occurs, who the thieves are, and what the theft means to ordinary people. It will offer recommendations and ideas that may help to change the situation for the better.

1.3 A Crisis of Modernity?

There is a view that Sierra Leone's war is a crisis of modernity, caused by the failed patrimonial system of successive post-colonial governments. This argument makes the case that three decades of bad government blighted the hopes of most young people for a meaningful life, and that RUF terror techniques - conditioned in part by repeated viewing of *Rambo* and other 'lone warrior' videos - are compensation for a lack of opportunity. Some writers cite the RUF's Libyan connections, and talk of a highly educated 'excluded intellectual' leadership. This sort of argument posits a clear RUF political agenda within an understandable - even reasonable - anthropological and environmental context.²

Sierra Leonean writers have rejected this type of analysis on several grounds. While it is true that the RUF is made up of disaffected young men, a very high proportion of them were already alienated and dangerous before the RUF opportunity for rape, drugs and pillage arose. Only a fraction of Sierra Leone's young people joined the RUF of their own volition. The main RUF recruits have been drawn from the ranks of illicit diamond miners and from the same Freetown slums where President Siaka Stevens (1968-1985) recruited his brutal Internal Security Unit and where President Joseph Momoh (1985-1991) found the material to double the size of his army. Others were children who were kidnaped, drugged, and forced to commit atrocities. The 'radical intellectual' roots of the RUF were extinguished in murderous internal purges during the RUF's first year of operation. And its brutal attacks on civilians stand in sharp contradiction to its ostensible aim of creating a 'revolutionary egalitarian system'.³

While there is no doubt about widespread public disenchantment with the failing state, corruption and lack of opportunity in Sierra Leone in the late 1980s and early 1990s, similar problems elsewhere have not led to years of brutality by forces devoid of ideology, political support and ethnic identity. Only the economic opportunity presented by a breakdown in law and order could sustain violence at the levels that plagued Sierra Leone after 1991.

Box 1: KEY EVENTS IN SIERRA LEONE'S HISTORY

- 1787: 377 black and white colonists from Britain land in Sierra Leone; most die within two years
- 1792: 1200 'free Negroes' sail from Nova Scotia to Sierra Leone where they establish the settlement of 'Freetown'.
- 1799: A Royal Charter gives legal status to the colony.
- 1808: Establishment of a Crown Colony (Sierra Leone thus becomes the first modern state in sub-Saharan Africa).
- 1827: Establishment of Fourah Bay College, the first university in sub-Saharan Africa.
- 1896: Establishment of a Protectorate over territories of the interior.
- 1961: Independence
- 1964: First Prime Minister, Sir Milton Margai, dies; power goes to his brother, Albert Margai.
- 1967: General elections are marred by widespread violence, in part because of Margai's plan to establish a one-party state. Army takes power as 'National Reformation Council'.
- 1968: Non-commissioned officers seize power and invite Siaka Stevens, apparent winner of the 1967 election, to take power. Elections reconfirm him in office.
- 1970s: Stevens consolidates power through violence, corruption and intimidation, creating an Internal Security Unit with Cuban assistance. 1977 elections are rigged and marred by violence, after which Stevens declares a one-party state.
- 1985: The economy in ruins, Stevens - now 80 - hands over to former army chief, Joseph Momoh.
- 1990: Momoh relaxes press restrictions; moves to reintroduce multi-party democracy; UNDP *Human Development Report* places Sierra Leone last out of 160 countries; Charles Taylor begins his war in Liberia; 80,000 Liberian refugees flee to Sierra Leone; ECOMOG is established with Freetown as the rear base.
- 1991: Former army corporal Foday Sankoh leads Revolutionary United Front (RUF) attacks on Sierra Leone border towns from Liberia; attacks continue, marked by brutality against civilians; children are kidnapped and inducted into RUF; Momoh doubles the army, recruiting 'hooligans, drug addicts and thieves' and children.
- 1992: April: A mutiny by unpaid soldiers becomes a coup; Momoh flees; National Provisional Ruling Council (NPRC) assumes power under Capt. Valentine Strasser (age 27); brutal war continues; RUF attacks target civilians. Their hallmark is crude amputations - feet, hands, lips, ears, noses - with special attention to women and children. 120,000 refugees flee to Guinea; widespread internal dislocation.
- 1993: Kamajor (traditional hunters) militia begins fighting against RUF along with Republic of Sierra Leone Military Forces (RSLMF) and ECOMOG; rebel atrocities continue.
- 1994: RUF overruns diamond areas, bauxite and titanium mines; economy essentially bankrupt; Freetown threatened. By now an estimated 50,000 have been killed and about half the country's 4.5 million people have been displaced.
- 1995: February: NPRC employs Gurkha Security Guards for combat duty, but following setbacks they withdraw; May: Executive Outcomes contracted by NPRC; by June, the RUF is beaten back from Freetown and diamond areas liberated; rebel activity subsides.

- 1996:** January: Palace coup in which Julius Maada Bio replaces Strasser; peace talks with RUF begin in Abidjan; March: elections marred by RUF violence are reported to be otherwise free and fair by international observers; Ahmed Tejan Kabbah becomes President; November: Foday Sankoh and Kabbah sign a peace accord.
- 1997** May: Soldiers release 600 prison inmates and seize power, forming the Armed Forces Ruling Council (AFRC). Kabbah flees. Major Johnny Paul Koroma, a former coup plotter, becomes chairman and invites RUF to join the government. AFRC/RUF rule characterized by systematic murder, torture, looting, rape and shutdown of all formal banking and commerce throughout the country.
- 1998** February: ECOMOG launches offensive on Freetown, driving the AFRC/RUF out. President Kabbah returns. Sierra Leone armed forces disbanded. Towns and villages throughout the country experience continued attacks and extreme brutality from AFRC/RUF forces. July: Security Council creates UN peace-keeping operation, UNOMSIL, and sends 40 military observers and later human rights observers. October: An estimated 10,000 - 12,000 ECOMOG troops continue to battle AFRC/RUF. An estimated 800-1200 Nigerian soldiers have been killed, and the cost is estimated at \$1 million per day. October: Trials of soldiers and civilians result in death sentences for many, including Foday Sankoh. Attacks continue; RSLMF regroups.
- 1999** January: AFRC/RUF elements attack and enter Freetown resulting in two weeks of arson, terror, murder and dismemberment. Cabinet ministers, journalists and civil servants are tortured and killed. Parts of the city are razed, over 6000 civilians are killed before ECOMOG pushes them back. 2000 children are reported missing. February: Nigerian presidential candidates agree that Nigeria should get out of Sierra Leone soon after Nigeria's return to civilian rule on May 29. The UN Security Council discusses Sierra Leone. July: GOSL concludes a negotiated peace agreement with the RUF, giving Foday Sankoh and several other RUF and AFRC leaders cabinet positions. All RUF and AFRC leaders are given amnesty. August: Phased Nigerian Troop withdrawal begins. October: UN Security Council approves a 6000-member Peacekeeping Force for Sierra Leone with authority to use 'deadly force' if required. December: Kenyan and Indian contingents of the new UNAMSIL peacekeeping force begin to arrive in Sierra Leone.

1.4 The Political Economy of War

Claueswitz said that war is 'the pursuit of politics by other means'. David Keen has amended this, saying that 'war is the pursuit of economics by other means'.⁴ He is critical of journalists like Robert Kaplan who depict wars like Sierra Leone's as little more than chaotic madness and the result of 'ancient economic hatreds'.⁵ He suggests that 'traditional economics (with a focus on peaceful markets) and traditional political science (with a focus on elections and voting), as well as traditional military history (with a focus on bureaucratic war) are simply too rigid and narrowly defined.' The point of some wars, he argues, is not for one side or the other to win them, but to 'engage in profitable crime under the cover of warfare'. War, then, becomes not so much a breakdown of society as a complex, shifting and re-ordering of society. Neither government nor rebels may be in full command of their followers, and both inevitably require the financial support of outsiders. Often these outsiders are 'investors' likely to seek an economic return for their support.

External intervention in complex emergencies has focused to a large extent on emergency assistance at one end, and on calls for negotiation, often brokered by neighbouring (or even distant) countries at the other. In between can be found multifarious efforts at reconstruction, rehabilitation and reconciliation, often far removed from the principal combatants, and far removed from the elements that made war an attractive proposition for them in the first place. And often far removed from those who invest in supporting one side or the other in a conflict. Such situations mock the Carnegie Commission report, *Preventing Deadly Conflict*, which recommends that private companies 'put pressure on governments to seek an early resolution of emerging conflict'. Private companies, or at least certain types of private company, may well benefit from *increased* destabilization, finding new opportunities for short-term profit and longer-term gain, picking up the pieces abandoned by earlier investors who have fled, or who shelter away from the front, behind the facade of arm's length but interlocking relationships.

1.5 Private Power, Commerce and State Institutions

It is odd, given the voluminous critical discourse on aid agencies, development assistance, humanitarianism and war, that very little study has been devoted to the role of the private sector in modern complex emergencies and their aftermath. This is especially surprising, given the now widespread prescription of the private sector as an appropriate and workable solution for most economic and development ailments. Aid has been implicated in causing economic and political collapse and in delaying its recovery. NGOs are frequently assailed for opportunism, individualism, amateurism and lack of transparency. The UN, Northern governments and their politicians are regularly held up to scorn for inaction and tight-fistedness. But the private sector is rarely discussed in the context of complex emergencies, except as something that must be 'jump-started' in the reconstruction phase of waning emergencies.⁶

The OECD *Development Assistance Committee Guidelines on Conflict, Peace and Development Co-operation* has considerably more to say about NGOs than it does about the private sector, devoting only one or two lines to the subject under the general rubric of the need for a stable macroeconomic environment in post-conflict situations. The Carnegie Commission report devotes two pages to the subject, suggesting primarily that businesses may be well placed to detect the early warning signs of conflict, and could pressure governments to seek an early resolution.

During a conflict, normal commerce is likely to be disrupted or destroyed, although new opportunities, not to mention opportunism, inevitably arise. The arms trade, for example, is likely to grow and thrive. Much of the private sector, however - although operational and in plain sight - remains largely invisible, or is deemed irrelevant by those reporting on conflict.

'Investors' in natural resources such as tropical hardwoods, or mineral resources such as gold or diamonds can play an important role during an emergency, in providing or denying foreign exchange, jobs, political support. Prior to the downfall of Zaire's Mobutu Sese Seko, for example, America Mineral Fields, a Vancouver-listed penny stock company with headquarters in Hope, Arkansas, signed a \$1 billion deal with rebel leader Laurent Kabila for mineral rights to high grade copper and cobalt tailings near Kolwezi. The company's CEO, Jean-Raymond Boulle, put his own plane and other assets at Kabila's disposal during his final struggle to topple Mobutu.⁷

There is another, more controversial but nonetheless available role for the private sector - the use of private security firms whose services range from equipment and training through to the use of direct force. Private security firms are not a new phenomenon, but in recent years they have begun to provide a more up-scale corporate service to governments whose problems are beyond the abilities of their own armed forces, and beyond the interest of the international community. Executive Outcomes and Sandline have been the most prominent of these companies in recent years, the former providing effective support at critical moments to the governments of Angola and Sierra Leone, the latter becoming embroiled in controversies as far apart as London and Papua New Guinea.* The intimate connection between private security firms and the Sierra Leone diamond industry will be examined in detail in this report.

Their involvement is hardly surprising. Commercial enterprises operating in an environment with severe security problems can do one of three things: they can hope for the best; they can leave; or they can do something about it. After 20 years of war in Angola, a decade in Bougainville and five years in Sierra Leone, it is not surprising that beleaguered governments, failed by the UN and international diplomacy, would turn to options offered by the private sector. Although few officials in the international community openly endorse enterprises like Executive Outcomes and Sandline, the privatization of defence is not without appeal in the face of ineffective and inefficient public institutions. Certainly, Executive Outcomes was enthusiastically cheered by Sierra Leoneans in 1997 for beating the RUF back from the gates of Freetown.

1.6 Conclusion

It is not, however, quite that simple. William Reno argues that 'internal warfare and the rise of so-called warlords and other armed factions, develops out of a particular Cold War era relationship between private power, commerce and state institutions in weak states.'⁸ He uses the term 'shadow state' to explain the relationship between corruption and politics, and the growth of personal rule that can develop behind the facade of state sovereignty. Reno's shadow state ruler manages by fiat through a patronage network, manipulating factions and tensions, and weakening any formal institution - army, police, universities, central bank, the civil service - that might pose a challenge. This is Sierra Leone with all t's crossed under Siaka Stevens and Joseph Momoh. Inevitably, in the gray area of disintegration between shadow state and collapsed state, challenges do arise, often from sociopathic entrepreneurs willing to employ whatever level of violence is required to serve their objectives.

The willingness by factions and entrepreneurs to use violence is encouraged by the inability of the collapsing state to mount an effective defence. State employment of external security firms can become part of the scenario, but these are likely to be linked to other commercial interests, never entirely trustworthy and often mutating into a kind of protection racket. In the case of Sierra Leone, the connection between diamond mining firms and private security forces (described in greater detail below) is indivisible. As state kleptocracy and disintegration progressed, the peculiar nature of the diamond industry allowed large name-brand companies to withdraw from the front

* Sandline director Tim Spicer prefers 'private military armies' to the term 'mercenaries'.

lines, leaving the field to 'juniors' - companies more willing to take risks with their capital and their reputation, and sometimes more willing to engage in unethical behaviour. The same has been true in Angola, Liberia and Congo. Marketing channels, long dominated in the informal diamond mining sector by what might be called 'disorganized crime', are increasingly influenced by *organized* crime and by the transcontinental smuggling not just of diamonds, but of guns and drugs, and by vast sums of money in search of a laundry. Violence in such cases is central to the advancement of those with vested interests. As Reno puts it, the organization of violence - 'who becomes a partner in the direct exercise of power and who gets managed into becoming a business' - are issues of critical concern for those interested in ending violence and building sustainable peace.⁹ Political settlement alone does not necessarily mean that the deeper causes of conflict have been solved. It may be little more than a temporary realignment of political and economic interests, especially if key actors have a vested interest in the continuation of conflict.

It is worth noting at the outset of this study, therefore, that commercial interests of all kinds, licit and illicit, can be as potent a determinant of outcomes, if not more so, than the work of international aid agencies. Milton Friedman once wrote that 'There is one and only one responsibility of business - to use its resources and engage in activities designed to increase its profits, so long as it stays within the rules of the game, which is to say, engages in open and free competition without deception and fraud'.¹⁰ The problem in emergency situations is that the 'rules of the game' may well be ignored. In the absence of enforceable laws, rules and conventions, context and temptation inevitably lead to commercial distortions and entanglements that are not in the best interests of the population at large.

Until the attraction of diamonds to criminals and international predators is defused, there is unlikely to be lasting peace in Sierra Leone, or the resources required to sustain it. This paper will argue that peace in Sierra Leone will remain unsustainable until the economic gains to be derived from criminality and violence are squarely addressed. Some remedies to the economic problem are within the purview and capacity of the government of Sierra Leone. Many, however, are not. Concerted international attention to the economics of the Sierra Leone conflict will be required if the fragile peace of 1999 is to survive for any length of time.

Keen suggests that 'as with the mutation of viruses... war is turned against civilians in the pursuit of profits, [and] these civilians may be forced to resort to violence in order to survive. The impoverishment of particular geographical and ethnic groups may also precipitate the "spreading" of war to new areas as predatory groups seek new assets to appropriate'.¹¹ As the mutation of the war in Sierra Leone continued through the 1990s, so did the number and type of predators, each seeking to gain from one side of the conflict or another. This study will examine the role of Lebanese diamond dealers and traders, and connections between Sierra Leone's diamonds, the Lebanese civil war and Israel. It will review the economic benefits to neighbouring states (and neighbouring warlords) of diamond smuggling - Liberia in particular. It will examine the role and responsibilities of the Belgian government and the Diamond High Council, which represents the Belgian diamond industry. And it will describe the involvement of key international diamond mining and selling companies, from De Beers at the top, to penny stock promoters at the bottom. The study will also deal with less savoury elements of the diamond trade: organized crime, the international weapons trade and mercenaries.

2. WORLD DIAMOND RESERVES AND PRODUCTION

2.1 Introduction

The diamond business is a massive enterprise. In 1998, the industry produced an estimated 115 million carats of rough diamonds with a market value of US \$6.7 billion. At the end of the diamond chain, at the level of the consumer, this was converted into 67.1 million pieces of jewelry worth close to US \$50 billion.

Diamonds are derived from two main sources. Primary deposits are those which occur in basic volcanic rock, known as kimberlite. Secondary deposits are those which occur in alluvial deposits of weathered kimberlite. Although kimberlite is found worldwide, little is diamondiferous. If it is large enough and sufficiently diamondiferous to be mineable, the term diamond or kimberlite 'pipe' is used (although technically, the term 'kimberlite pipe' is used whether the pipe is diamondiferous or not).

The mining of kimberlite pipes is an expensive and capital-intensive operation, involving tunneling underground for hundreds of feet in order to extract diamonds. Where there are large and productive kimberlite pipes, one will usually find large companies with extensive investment funding. Although there are many kimberlite pipes in the world, a large proportion of diamonds are still recovered from alluvial deposits. Alluvial diamond fields are created by the disintegration of volcanic rock (kimberlite) over a long period of time. The product of the disintegration, including diamonds, can be carried away by river systems and deposited over widely scattered areas, including the sea-bed. Alluvial mining involves the separating of rough diamonds from earth and gravel. This can be done by a single person working with a sieve and shovel, or by large dredges which can remove tons of earth and gravel quickly.

Gemstones, including diamonds, are weighed in carats. One carat is 0.20 grams. Individual stones vary in average size from 0.01 ct. (about 1 mm in size) to more than 0.7 ct. Prices vary according to quality - weight, shape, clarity, colour. A 1 ct. gem-quality rough stone could be worth as little as US \$12, or as much as US \$2000. A cut diamond of this size would be worth many times more than this once it reaches the retail market.

Prior to the discovery of diamonds in South Africa in 1867, there were only two significant places in the world where diamonds were known to exist. Significant mining of diamonds in India dates from antiquity, and Brazilian diamonds were discovered in 1725.¹² Since 1867 about 20 additional producing countries have been identified. These diamond producing countries and production estimates can be found in Table 1.

The impact on global production of the growing number of sources has been enormous, with world production levels rising from about 300,000 carats in 1870, to 3 million carats in 1920, to 42 million carats in 1970, to the present production of 115 million carats.

In recent years, Botswana and Russia have been competing for the position of leading world diamond producer (by value). In 1998, Botswana produced approximately US\$ 1.6 billion worth of rough diamonds while Russia produced US \$1.3 billion. South Africa is ranked 3rd in the world. In the same year Sierra Leone's official production equaled US \$1.05 million.¹³ Jwaneng, a low-cost pit mine in Botswana remains the world's richest diamond operation, producing 12.5 million carats annually, worth more than US \$1 billion. In terms of pure volume Australia's output greatly surpasses

all other countries by producing 40 million carats a year. However Australian diamonds are of lower quality and are smaller in size, and most are sold in Indian markets at relatively lower prices.

Table 1: Rough Diamonds: Estimated World Production by Type and Country
(thousands of carats)

COUNTRY	1995	1996	1997	1998
Gemstones				
Angola	2600	2,220	1,110	2,400
Australia	18,300	18,897	18,100	18,400
Botswana	11,500	12,400	15,100	13,500
Brazil	676	200	300	300
Canada	Nil	Nil	Nil	278
CAR	400	350	400	330
China	230	230	230	230
DRC	4,000	3,600	3,300	13,000
Cote d'Ivoire	53	202	207	207
Ghana	126	142	664	640
Guinea	274	165	165	165
Liberia	60	60	60	60
Namibia	1,382	1,400	1,420	1,600
Russia	10,500	10,500	10,500	10,500
Sierra Leone	113	162	64	50
South Africa	5,070	4,280	4,380	4,100
Venezuela	125	99	158	100
Zimbabwe	114	300	321	40
Other	119	165	121	126
Total	55,700	55,400	56,600	66,000
Industrial				
Angola	300	250	124	364
Australia	22,400	23,096	22,100	22,500
Botswana	5,300	5,000	5,000	5,000
Brazil	600	600	600	600
CAR	130	120	100	200
China	900	900	900	900
DRC	13,000	17,000	18,900	2,000
Cote d'Ivoire	22	100	100	100
Ghana	505	573	166	160
Guinea	91	40	40	40
Liberia	90	90	90	90
Russia	10,500	10,500	10,500	10,500
Sierra Leone	101	108	40	30
South Africa	5,880	5,670	5,790	6,200
Venezuela	66	73	90	150
Zimbabwe	90	137	100	30
Other	101	120	105	106
Total	60,100	64,400	64,700	48,900
GRAND TOTAL	116,000	120,000	121,000	115,000

Source: 1998 Annual Report, United States Geological Survey, 'Mineral Industry Surveys – Gemstones', p. EE 17

2.2 An Important Note on Statistics

Table 1 is based on the United States Geological Survey (USGS), which is generally regarded as an authoritative source of information on diamond production statistics. Its statistics, however, are based mainly on production figures supplied by governments. In countries where there is significant theft or smuggling, government statistics are likely to represent as little as 60 per cent of actual production.

For example it is estimated that theft in South Africa represents about seven per cent of total production. In Russia it may be as high as 40 per cent. Government officials in Sierra Leone estimate that in recent years as much as 85 per cent of the country's diamond production has been stolen and is not, therefore, included in the USGS figures. In other words, the USGS figures for Sierra Leone are very low.

This is borne out by historical data. Until the advent of organized and government-supported crime in the 1970s, Sierra Leone traditionally exported several hundred thousand carats a year (See also Section 4, below). In 1998, the USGS figure for Sierra Leone was 80,000 carats. (The Government of Sierra Leone, in fact, recorded exports of only 8,500 carats.) If it is true that 85 per cent of the diamonds are smuggled out of the country, this would suggest an annual production total of at least 530,000 carats, a figure more in keeping with earlier trends. A figure like this, while only an estimate, is borne out by statistics on Liberia, where no government figures have been available for years. The USGS estimates annual Liberian production at 150,000 carats, a very generous amount according to most technical reports. The Belgian Diamond High Council alone, however, records 1998 imports from Liberia of 2.6 million carats and a total of over 28 million carats in the three preceding years.

The discrepancy in statistics is not a matter of clerical error. Rather it points to - in Liberia's case - a very great contradiction between known reserves and actual exports. The diamonds that are exported from Liberia originate elsewhere, a high proportion of them in Sierra Leone. The report will return to this very important point in detail in Sections 3.3 and 4.6 below.

2.3 The Future Production of Diamonds

Most existing diamond mines have a reasonably long life expectancy. Overall, approximately two-thirds of total world production is derived from just eight mines, located in Australia, Botswana, Russia and South Africa. Most of these have a remaining mine life of at least 30 years and some up to 100 years. It is estimated that the Botswana sources will produce for another 25 to 100 years, the Namibia sources for a minimum of 18 years and presently-mined sources in South Africa will be productive for another 10 to 30 years. There are some mines in Angola and Russia that are predicted to have a shorter productive life, some as short as five years, however others have a projected longevity of up to 40 years.¹⁴

The greatest potential for future diamond finds is in areas where past exploration has been hampered by inhospitable location and climate, as in Siberia and northern Canada, and in offshore locations which have been constrained by limits of technology. It is estimated that there are diamond reserves of 1.5 billion carats off the coasts of South Africa and Namibia, and De Beers has in recent years developed new technologies to harvest them. There are also estimated to be large diamond reserves off the northwest coast of Australia, in the Arctic Ocean, off the coast of the Russian Federation and off the north coast of Canada and the west coast of Africa. In Angola geologists have identified more than 300 new kimberlite pipes. The greatest future source of diamonds is likely to be beneath the ice cap in Antarctica, probably the last great terrestrial source of diamonds. For now, however, the technology and international agreements do not permit mining in the area.

One of the world's most productive diamond finds has taken place in the Northwest Territories of Canada. The Ekati Diamond Mine, Canada's first, started production and produced

278,000 carats in 1998. When Ekati is at full capacity it is expected to have an annual production of four million carats, it will account for four per cent of global diamond production by weight, and six per cent by value. By 2002, Canada's second mine, Diavik, located just south of the Ekati lease, will come on stream. The Diavik site consists of four kimberlite pipes of high-quality gem diamonds. Diavik feasibility studies envisage production of six to eight million carats a year for about 15 years, with a total production value for the life of the mine in the order of US \$6 billion.

In Russia there is major exploration and mining throughout Siberia by Russian companies, De Beers, Archangel Diamond Corporation of Canada and the regional Geological Survey company, Arkgeo. In Guinea and Sierra Leone there appear to be substantial kimberlite pipes. In the case of Sierra Leone, the pipes have not been developed because of conflict in the country, and in Guinea, development is just commencing.

2.4 Sierra Leone and West African Diamonds

The diamond reserves and production levels of Sierra Leone are impossible to estimate accurately. Reserve estimates vary widely. At one end are the implausibly high numbers used by junior mining companies to create shareholder interest and confidence. At the other are comments like one from De Beers suggesting that the alluvial fields are worked out and the kimberlite pipes are '... only as large as two tennis courts and even those are being mined at their roots'.¹⁵ Somewhere between are estimates provided by professional groups such as the USGS, Natural Resources Canada and independent geologists.¹⁶

The other, and perhaps more important difficulty in generating accurate data for Sierra Leone, and West Africa generally, occurs as a consequence of inter-country smuggling. However, given these qualifications, certain things can be said.

In Sierra Leone the first diamond was found by members of the Sierra Leone Geological Department in Kono District in 1930 and significant production commenced in 1935. By 1937 Sierra Leone was mining one million carats annually, reaching a peak of two million carats in 1960. At that point Sierra Leone was producing one-third of the world's diamonds and diamonds largely supported the Sierra Leone government through taxes on diamond profits. Between 1952 and 1962 taxes paid to the Sierra Leone government averaged between 30 per cent and 60 per cent of profits and the profits were significant.¹⁷

From 1930 to 1998 approximately 55 million carats were mined (officially) in Sierra Leone. At an average price in 1996 dollars of US \$270 per carat, the total value is close to US \$15 billion. The first two kimberlite pipes were discovered in 1948 near Koidu on what is presently known as the Yengema Lease and in 1954 additional pipes were found in what has become known as the Tongo Lease. According to the noted geologist A.J.A. Janse, the once-rich Yengema and Tongo alluvial fields (not to be confused with kimberlite potential) are now largely depleted.¹⁸ The war, the export statistics from Liberia, and the interest in Sierra Leone of several aggressive junior mining firms suggest that this comment may be premature.

The report will return to the question of Sierra Leone diamonds in greater detail in Section 4.

3. ORGANIZATION OF THE INDUSTRY

3.1 A Preliminary Roadmap

The international diamond trade is unique in the world of business. It is secretive, iconoclastic, exploitative, and in the words of an Antwerp banker, 'still pretty medieval'. The term 'medieval' is apt. An industry which each year sells 67.1 million pieces of diamond jewelry, worth US \$49.4 billion, is largely controlled by a single company that sets the price and the market supply of 70 to 80 per cent of the world's entire rough diamond output.

This section of the report provides a brief overview of the major commercial and corporate interests involved in the diamond business: 'De Beers', Belgium and the Diamond High Council.

De Beers

'De Beers' and 'Oppenheimer' are names synonymous with the development and ownership of the mineral industries of South Africa since the middle of the 19th century. Two companies emerged from the South African diamond rush of the 1870s and 1880s - the Kimberley Central Mining Company and the De Beers Mining Company, named after the De Beers brothers, owners of the land where the rush began. In 1888 the two companies merged to form De Beers Consolidated Mines Limited. Over 100 years later, the company still has its registered office in Stockdale Street, Kimberly, South Africa.

In the late 1920s, the diamond industry was in a catastrophic state with too many diamonds and too few buyers. Sir Ernest Oppenheimer, appointed Chairman of the Board of De Beers in 1929, reorganized the diamond industry, essentially by offering to buy all the diamonds on offer throughout the world, in order to support a stable price. The Oppenheimer family has maintained its relationship with De Beers for 70 years. Harry Oppenheimer, who succeeded his father, turned 91 in 1999. He was succeeded as Chairman by his son, Nicky.

De Beers is likely the only private company in existence that has operated as a 19th century mercantilist firm, passed unscathed through the heyday of Western anti-trust and combines legislation, and without significant organizational change managed to fit into the late 20th century global model before globalization 'happened', and before monopolies re-emerged as a semi-acceptable form of business practice.¹⁹

The Anglo American Corporation was formed in 1917, with Ernest Oppenheimer as chairman and managing director, in order to gain access to capital markets in the United States. For many years, cross directorships and shareholdings meant that De Beers and Anglo American essentially controlled one another. In 1998, however, Anglo American re-structured, and was operationally separated from De Beers. The purpose of the separation, according to De Beers, was to 'assemble all the diamond skills and expertise which have long been De Beers' special strength in one independent, dedicated and integrated company, led by a highly focused management team, free to devote its full attention to its core role – the discovery, mining and marketing of diamonds.'²⁰ With the re-structuring, De Beers held 40 per cent of Anglo American PLC, which was newly listed on stock exchanges in London in 1998. The Chairman of Anglo American Corporation of South Africa

Limited (AAC), J. Ogilvie Thompson, remained Deputy Chairman of the De Beers Board of Directors.²¹

What is commonly referred to as 'De Beers' is organizationally two major companies. De Beers Consolidated Mines Limited (DBCM) is incorporated and has its headquarters in Kimberly, South Africa. De Beers Centenary AG (DECAG) is incorporated in, and operates from Lucerne, Switzerland.

De Beers Consolidated Mines Limited manages most activities in South Africa, including its mining operations, its marine company which mines offshore diamonds, its interests in the Central Selling Organization (see below) and companies which produce synthetic diamonds. As well, it controls all its investments in the Anglo American Corporation, holds a 10.9 per cent interest in the Swiss-based De Beers Centenary AG as well as other investments. De Beers Centenary AG manages all diamond operations in Botswana and Namibia, all diamond trading companies (including the Central Selling Organization) and a myriad of other investments.

De Beers mines or partners in mining the majority of the world's diamonds, it purchases by far the majority of all diamonds produced, and more or less sets the global price of rough diamonds on international markets. Probably its major role, and a role in which it has been extremely successful, is to maintain stable prices by manipulation of both the supply and demand for rough diamonds on world markets. This is done through its Central Selling Organization (CSO).

The CSO headquarters are in London, but it has buying offices around the world. The CSO sources diamonds from its own mines and it purchases from the 'outside market'. The outside market consists of diamonds produced by non-De Beers firms that are not contractually bound to sell to the CSO. The diamonds purchased by the CSO are in turn sold at 10 annual 'sights' (sales) to 160 'sightholders'. Sightholders are designated by De Beers and are presented with mixed 'parcels' of diamonds. The parcels are packages of combined rough gem quality and industrial diamonds, and may include stones from a combination of countries. Parcels are priced by De Beers and are bought by sightholders, sight unseen. Sightholders then take the diamonds to other cities where they are resorted and repackaged for onward sale, or for cutting and polishing.

Belgium and the Diamond High Council

If De Beers is the dominant name in the diamond business, its extended family resides in Antwerp, Belgium. Antwerp is undeniably the world centre for rough diamonds. More than half of the CSO sightholders reside in Antwerp. Antwerp is also the principal 'outside market' serving as a funnel for more than half of all the diamonds produced in the world. In Antwerp, transactions are settled in cash, even when they involve prices of six and seven figures. Diamond dealers often do not issue receipts; million-dollar deals are sealed on a handshake and entrance into the industry is almost impossible, except through family ties.

The formal trading of diamonds in Belgium is structured around the *Hoge Raad voor Diamant* (HRD), commonly known in the trade as the Diamond High Council or simply the HRD. The HRD is a non-profit organization established in 1973. It is the umbrella organization officially acknowledged as the representative and spokesperson for the overall Belgian diamond industry. The HRD maintains only one office outside of Belgium, in Toronto. The HRD groups four Belgian Diamond bourses (exchanges), the Federation of Belgian Diamond Bourses, professional diamond

associations and two trade unions. The stated mission of the HRD is to maintain and to strengthen the position of Antwerp as the world centre for diamonds. The HRD achieves this by carrying out the following functions:

- it supports and defends the interests of the Belgian diamond trade and industry, both at home and abroad;
- it develops state-of-the-art techniques for grading and processing diamonds;
- it handles import and export formalities;
- it provides proof of authenticity for polished diamonds;
- it supervises and trains specialized employees.

The most important branches of the HRD are its Institute of Gemology, a Certificates Department, the Industry Department and Diamond Office.

By far the most important function of the HRD is to supervise the importation, valuation and export of diamonds and it does so at an annual turnover rate of approximately 500 million carats of industrial, gem and polished diamonds, valued at roughly US\$ 20 billion.

For the purposes of this report, the most important branch of the HRD is the Diamond Office. The Diamond Office is responsible for the HRD's trade and evaluation aspects, and it also plays a unique role as the diamond customs agent of the Government of Belgium. The structure of the Belgian industry is discussed in greater detail in Section 3.3, below.

3.2 De Beers – A Diamond is Forever

Managing Supply and Demand

De Beers dominates the diamond industry unequivocally. De Beers produces 50 per cent of the world's gem diamonds (by value), from its own mines in South Africa and in partnership with the governments of Botswana, Namibia and Tanzania. In addition, it purchases diamonds from 'outside markets' and in turn markets them through its CSO. The total of De Beers own mining output plus diamonds purchased from the 'outside market' results in De Beers selling each year, on average, 70 to 80 per cent of the world's diamond output.

De Beers acknowledges its monopolistic appearance,²² but argues that its approach benefits everyone from the miner on the ground to the consumer who purchases diamond jewelry. 'Control' is necessary in the industry. Harry Oppenheimer explains:

'Whether this measure of control amounts to a monopoly I would not know, but if it does, it is certainly a monopoly of a most unusual kind. There is no one concerned with diamonds, whether as producer, dealer, cutter, jeweler or customer, who does not benefit from it. It protects not only the shareholders of diamond companies, but also the miners they employ and the communities that are dependent on their operations.'²³

The current De Beers corporate position is similar:

‘Price fluctuations accepted as normal in the case of most raw materials would undermine confidence in the value of a luxury product like diamonds. De Beers’ policy is to maintain price stability by tailoring supplies to the cutting centres to meet prevailing demand while continuing to buy from producing nations and on the open market’.²⁴

De Beers’ 1998 Annual Report refers to the company’s principles and interests, provisions which are aimed at maintaining its monopolistic position. Two of the core principles are:

- our striving for stability in the world-wide diamond industry for the benefit of all our stakeholders and our core partners;
- our consequent determination to remain the largest diamond producer in value terms and – in all respects – the leading diamond company in the world.²⁵

De Beers maintains stability and its position in the international market through various mechanisms. The CSO directly dictates the price of diamonds for all sightholders, and indirectly influences price by periodically withholding or releasing diamonds on the market. In addition, De Beers’ strategy includes efforts to own outright or to partner with ‘juniors’, in order to control the major diamond fields in the world.

The two major branches of De Beers, De Beers Consolidated Mines Limited (DCM) and De Beers Centenary AG, have extensive economic power and market reach. The following lists, while not by any means complete, provide insight into De Beers diversity and market reach. As of December 31, 1998, De Beers held 100 per cent ownership in the following subsidiary companies:

- eleven separate finance and investment companies incorporated in Luxembourg, Switzerland, the Isle of Man, Belgium, British Virgin Islands, Cayman Islands, Namibia and Netherlands;
- eight separate diamond trading companies incorporated in Switzerland, Bermuda, Botswana, Liberia, Namibia, Panama, Tanzania and the United Kingdom;
- three separate diamond manufacturing and processing companies (synthetic diamonds) incorporated in the Isle of Man, Ireland and Sweden;
- three separate manufacturing companies incorporated in Germany, Netherlands and the United Kingdom;
- four separate administrative companies incorporated in Bermuda, Canada and Ireland;
- one air charter company incorporated in the United Kingdom.

Additional listed investments, which are not formally subsidiaries of De Beers, include:

- a 26 per cent share in Minorco SA;
- Zambia Copper Investments Limited;
- AngloGold Limited.

Together these three investments have a market value of US \$834 million. Unlisted investments of the De Beers group include:

- Sibeka Soci  t   d'Entreprise et d'Investissements S.A (Belgium);
- Erongo Mining and Exploration Company (Pty.) Limited;
- Anglo Middle Eastern Holdings Limited;
- Antwerpse Diamantbank N.V. (Antwerp Diamond Bank);
- a 50 per cent share in Debswana Diamond Company Limited (Botswana Government Diamond Company);
- a 50 per cent share in Namdeb Diamond Corporation (Namibia Government Diamond Company).

Together, these six unlisted investments are valued by the De Beers Board of Directors at slightly over US \$2.1 billion.

De Beers dominates the supply side in Botswana, South Africa, Angola and Namibia. As well, Task Holdings, an investment company controlled by the Oppenheimer family, controls 41 per cent of Archangel Diamond Corporation of Canada, which mines rich kimberlites in Russia and holds close to 50 per cent of the Russian mining company of Severalmaz. The discovery of rich diamond fields in the Canadian Northwest Territories persuaded De Beers to establish an office in Vancouver, Canada, and to partner with the Canadian Mountain Province Mining Company in order to exploit Canadian fields.

The rules of the game for De Beers partnerships are tough, as a De Beers official states: 'We want the sales from any mine to go through the CSO; we want to manage the operation and we want to have more than 50 per cent of the shareholding'.²⁶ Regarding De Beers's partnerships with the junior companies, one analyst says, 'The lion

Box 2. Playing Rough in the Diamond Business

David Gadd-Claxton does not mince his words when he speaks of De Beers: 'I highly respect them, and I hate them like f---ing poison.' Gadd-Claxton is mine manager for Canada's Southern Era Resources in South Africa and an ex-De Beers's employee.

When Southern Era's Chris Jennings discovered the M1 pipe in Marsfontein, the company thought it had hit the motherlode. But a group of South Africans claimed to be heirs to the property, saying they had never renounced the mineral rights. A court battle, followed, which at first Southern Era thought it could win.

Southern Era's chances dimmed, however, when De Beers stepped in and bought out the heirs, and Southern Era found itself dealing with the most powerful adversary in the diamond business. After a six-month fight Southern Era caved in and on June 1998 they agreed to give away a majority of the find to bring the dispute to an end, retaining 40 per cent of the mining rights. Part of the deal to end the dispute also gave De Beers the exclusive right to market all production.

In the end Gadd-Claxton is wistful, 'we'd do a joint venture with De Beers again,' he agrees, adding: 'We'd be wiser. We'd negotiate better.'

Toronto Globe and Mail, July 31, 1999

may lie down with the lamb, but the lamb is not going to get much sleep.²⁷

De Beers Central Selling Organization (CSO)

The CSO originated as a result of the virtual collapse of the diamond market during the depression of the 1930s. In 1934 Sir Ernest Oppenheimer created the CSO to establish what De Beers refers to as a system of single-channel marketing. The system and the strategy is to support artificially high market prices - what De Beers calls 'price stability' - by tailoring supplies to the cutting centres to meet prevailing demand, while continuing to buy from all diamond producers and on the open market. The enduring success of this strategy rests on two main factors:

- contractual quota arrangements in which the main producers who sell through the CSO withhold temporarily from sale diamonds which are not in demand;
- De Beers' extensive financial resources which enable the CSO itself to hold a 'buffer' stock of diamonds until demand improves.

Most of the world's rough gem diamonds are sent to the London CSO where they are sorted into over 14,000 separate categories based on shape, quality, colour and size. In addition to London, the CSO operates sorting and valuing operations in Botswana, Namibia, South Africa and Switzerland. Once sorted, the diamonds are blended into selling combinations - 'parcels' - that are prepared for sale to the company's clients, the 'sightholders'. The parcels vary, including gem diamonds, 'melee' (mix) and 'boart'. Boart is intended for industrial use. 'Mix' are smaller stones, but they may have a high value as some dealers may be interested in a specific quality or stones of a certain colour.

De Beers sells to only 160 sightholders in the world. Diamond parcels are put together solely by De Beers; the price of parcels is set by De Beers; the 'sightholders' are chosen by De Beers; and the parcel price is non-negotiable. It is a rigorous business, and De Beers expels sightholders who refuse to purchase at the set price.

All sightholders are leading diamond cutters and polishers, or dealers chosen by De Beers. Ten 'sights' (sales)

Box 3. How Prices are Maintained

Next to the United States, the Asia-Pacific region is the largest retail market for cut and polished diamonds and diamond jewelry. However, with the disintegration of Asian economies in 1997, retail diamond sales fell by 18 per cent in a single year. De Beers responded by significantly reducing diamond sales through its CSO in the latter part of 1997 and throughout 1998, stockpiling diamonds in order to maintain the price levels of previous years. As a result, sales by the CSO during 1998 were US\$3,345 million - a drop of 28 per cent on the previous year. De Beers then convinced other 'core sellers' which were contracted to the CSO to share the burden by agreeing to stockpile 26 per cent of their production, despite the short-term effect on revenue. Overall, De Beers was successful in reducing stocks of rough and polished diamonds by a value of US \$1 billion and, in De Beers's terms, 'leaving the stock-to-sales ratios in the cutting centres at much healthier levels'. What this means for the consumer is artificially determined higher retail prices.

Source: De Beers Annual Report, 1998

are held each year. The sights take place in London, Lucerne and Johannesburg. Sightholders apply for parcels in advance, and their individual requirements are matched as closely as possible from the available supply of diamonds.

In addition to defining buyers and setting prices at the microeconomic level, De Beers strongly affects the macroeconomic market price by manipulating the world supply of rough diamonds. It also influences markets through an extensive advertising strategy. Even though De Beers does not sell finished diamonds or diamond jewelry, the company has an annual advertising budget of US \$200 million.

With an increasing number of operational diamond companies and potentially productive diamond mines throughout the world, De Beers has consistently formed new partnerships in order to maintain its control over the market and expand the range of CSO purchasing. For example:

- in December 1998 De Beers finalized a new sales contract with Almazy Rossii Sakha (Alrosa), the Russian conglomerate which is second only to De Beers in the production of diamonds. Alrosa produces 98 per cent of the total output of Russian rough diamonds and accounts for 28 per cent of CSO sales. Under the terms of the agreement, Alrosa will sell a minimum of US \$550 million worth of diamonds a year through the CSO, out of a planned production of US \$1.5 billion;
- in March 1999, De Beers signed a three-year deal with Broken Hill Properties (BHP) to purchase 35 per cent of the production from the Ekati mine in Canada's Northwest Territories. The Ekati mine is expected to be one of the most productive mines of the 21st century, representing about six per cent of the world's diamond supply by value.

For De Beers, such agreements mean that fewer diamonds are likely to reach markets that are not dominated by the CSO. There are, nevertheless, occasional industry revolts:

- In 1997 De Beers faced an unprecedented revolt as gem dealers and jewelry manufacturers protested the crushing effects of a strong US dollar and the disintegration of Asia-Pacific economies. The industry's main body accused De Beers of pricing stones in a way that could force them out of business. The World Federation of Diamond Bourses declared that: 'Pricing and marketing policies of De Beers resulted in unacceptably low profitability, which threatens the viability of diamantaires (diamond dealers) worldwide.'²⁸
- In 1997 Argyle, Australia's largest diamond producer, stopped selling to the CSO after De Beers re-balanced prices away from smaller diamonds towards more expensive stones. Australia produces lower value gems and currently sells the majority through markets in India where there are approximately 180,000 diamond cutters;
- In July 1999, the U.S. jeweler, Tiffany & Company, signed a contract with Aber Resources Ltd. Aber, a Canadian 'junior', had 40 per cent of the Northwest Territories Diavik property, and Rio Tinto PLC had 60 per cent. The deal with Tiffany will see a 'substantial portion' of Aber's production sold directly to New York. This direct marketing relationship between a mining company and a retailer is unprecedented and is designed to get around De Beers and the CSO.²⁹

De Beers and Sierra Leone

The present connection between De Beers and Sierra Leone is indirect. Until the 1980s, De Beers was directly involved in Sierra Leone, had approved concessions to mine diamonds offshore, and maintained an office in Freetown. The historical connection is discussed in greater detail in Section 4.1, below. As late as 1994, however, De Beers still held concessions and rights for offshore mining in Sierra Leone.³⁰ And in 1997, the company had tentative plans to re-open a small purchasing office in Freetown. Because of hostilities in Sierra Leone, however, these plans were shelved.

De Beers questions the economic viability of pursuing diamonds in Sierra Leone. There have been recent (1999) overtures from the Government of Sierra Leone for De Beers to return, but at the time of writing, the company had apparently not reached a final decision, '...as the pricing structure of diamonds is such that it would not be cost efficient.'³¹ De Beers also questions whether kimberlite resources in Sierra Leone are as rich as others believe.

There are several other ways in which De Beers is involved with Sierra Leone diamonds, however. De Beers maintains a diamond trading company in Liberia (Polestar Limited) and a buying office in Conakry, Guinea.³² Both countries produce very few diamonds themselves, and Liberia is widely understood to be a 'transit' country for smuggled diamonds. Many of these diamonds are of Sierra Leonean origin, and others are reportedly of Russian and Angolan origin (See Section 4.6).

De Beers says that it does not purchase Sierra Leonean diamonds. Through its companies in several West African countries, however, and in its attempts to mop up supplies everywhere, it is virtually inconceivable that De Beers is not purchasing diamonds that have been smuggled out of Sierra Leone. In the past, De Beers staff have taken the position that diamonds cannot be identified by source: '...if you are sitting in Tel Aviv or Moscow or New York, whatever the potential for positive identification, you have not a clue where they come from. Just to be clear, if he (the diamond seller) says they are Scottish diamonds, you take his word for it... They could be diamonds from the moon.'³³ In correspondence with the United Nations Sanctions Committee on Angola, De Beers has recently taken a more nuanced position (see Section 7, below).

3.3 The Belgian Connection

Antwerp: A Diamond's Best Friend³⁴

There are several historical reasons for Belgium's preeminence in the diamond industry, not least of them Belgium's colonial history and the role that Belgian mining companies have played in the Congo. At the beginning of the 20th Century, Amsterdam was the centre of the world diamond trade, but revisions in Dutch taxation laws between the two world wars made it less hospitable, and the majority of the traders gradually migrated to Antwerp. Antwerp already had a tradition for diamond craftsmanship, dating back to the 16th century. In 1930 the Antwerpsche Diamantkring - today the only rough diamond exchange in the world - already had 1,300 members. After World War II, Belgian authorities helped to rebuild the diamond industry, introducing strong incentives to revitalize the trade, and significantly loosening legislation and tax laws. As a result, Antwerp has thrived.

Today Antwerp annually processes more than half the world's consumption of rough, polished and industrial diamonds. It has the world's largest community of dealers, and more than half of all

De Beers's sightholders live in Antwerp. The Antwerp diamond district consists of one square kilometer, encompassing three small streets, but this area alone has 1,500 registered diamond traders, wholesalers and retailers. Within the district there are also four diamond bourses where much of the diamond trading is carried out, and four banks that specialize in financing the diamond trade.

The diamond trade contributes significantly to the Belgian economy, and more significantly to the regional economy of Flanders, as illustrated in Table 2.

Table 2. The Diamond Trade and its Economic Impact in Belgium, 1998

World Production (Rough/Industrial)	115 million carats
Market Value	US \$6.7 billion
Total Belgium diamond trade (imports plus exports)	525 million carats
Trade value through Belgium (imports plus exports)	US \$20.06 billion
% of CSO sales to Antwerp sightholders	44%
World sales outside CSO	US \$3 billion
Antwerp purchases of non-CSO diamonds	77%
Diamond contribution to Belgian GNP	1.5%
Diamonds as per cent of Belgian exports	7%
Diamonds as per cent of Flanders exports	12%
Taxes paid to Govt. of Belgium by diamond industry	US \$8 million
Diamond-related employment (Belgium)	27,000

Sources: Rombouts, Luc 'Antwerp Facets' (Diamond High Council, Antwerp, April 1999); Diamond High Council Press Conference (Antwerp, March 1999); Diamond High Council, 1998 *Annual Report*, Antwerp 1999.

Role of the Diamond High Council (HRD)

The formal organization of the Belgian diamond industry is structured around the *Hoge Raad voor Diamant* (HRD), or the Diamond High Council. In its 1998 Mission Statement, the HRD explains that its overall mission is to maintain and to strengthen the position of Antwerp as the world centre for diamonds. Two of the primary functions of the HRD are germane to a better understanding of the diamond trade:

- to support and defend the interests of the Belgian diamond trade and industry, both home and abroad;
- to handle import and export formalities for the Government of Belgium.³⁵

Belgian Import and Export of Diamonds

Table 3 provides a statistical summary of the diamond trade through the HRD. Table 3 also shows the significance of the Belgian re-export trade in diamonds (both gem and industrial) and polished diamonds. Most notable, is the fact that while Belgium imported nearly 256 million carats of diamonds in 1998, it only exported 7.6 million carats of polished diamonds in the same year, and the import and export of rough diamonds (by volume) was roughly equal. Belgium does not have an

extensive cutting and polishing industry. Its main business is the re-routing of diamonds. Belgium's most significant market for the export of rough diamonds is India, where over 180,000 diamond cutters are employed. In 1997 and 1998 Belgium re-exported 121 million carats and 149 million carats respectively to India. The re-export business is so significant that in 1998 the HRD exported more rough diamonds than it imported (133 million carats imported and 166 million carats exported).³⁶

Table 3. Statistical Survey - Belgian Imports and Exports of Diamonds

	1997		1998	
	(Millions of carats)	(millions of US\$)	(millions of carats)	(millions of US\$)
IMPORTS				
Polished Diamonds	6.5	4184.8	7.5	4247.4
Rough Diamonds	143.4	6774	133.7	5420.2
Industrial Diamonds	103	147.1	121.8	138.9
Total	252.9	11106	263	9806.5
EXPORTS				
Polished Diamonds	7	5144.1	7.7	5026.5
Rough Diamonds	145.1	6273	166.1	5127.7
Industrial Diamonds	91.7	114.4	88.5	101.6
Total	243.9	11531.4	262.3	10255.9
Total Imports and Exports	496.7	22637.4	525.4	20062.4

Source: Diamond High Council, 1998 Annual Report, Antwerp, 1999, p. 9.

Diamonds arriving in Belgium are channelled into a formal and legal structure built around the HRD's Diamond Office and supported by Belgian legislation. However, there are other markets that operate externally to the HRD and Belgian legislation. The various Antwerp markets can perhaps be referred to as the 'white', 'grey' and 'black' markets.

The White Market

The 'white' market refers to the legal and formal purchase and sale of diamonds. It is basically a wholesale and importing and exporting market. Legally, diamonds can only be marketed, imported and exported by companies and dealers registered with the HRD Diamond Office, and only Belgian and Luxembourg-registered companies can become registered members of the HRD. A special arrangement exists between Luxembourg and Belgium, resulting from the establishment of the Belgium-Luxembourg Economic Union (BLEU) in 1921. Licensing documents for the import and export of diamonds are valid for both Belgian and Luxembourg customs authorities. Luxembourg

follows Belgian customs regulations, and application forms for imports and exports are valid in both countries. The overall majority of companies and dealers are, however, registered in Antwerp and only a few large jewelers in Luxembourg import diamonds via Antwerp.

The largest single source of high quality gem diamonds are the Antwerp-based De Beers sightholders. In 1998, they purchased 28 million carats, valued at US \$1.5 billion. Although a larger quantity of Australian diamonds was purchased, they are of a lesser quality and therefore have significantly lower value. Table 4 shows the imports, import sources and value of all rough diamonds processed by the HRD in 1997 and 1998.

Table 4. Antwerp Imports of Rough Diamonds

	1998 Jan-Dec		1997 Jan-Dec	
	Millions of Carats	US\$ Millions	Millions of Carats	US\$ Millions
UK (non-CSO)	11.3	732	10.4	711
CSO	28.2	1,465	36.8	2,159
Congo (DRC)	20.9	613	15.8	553
Israel	3.5	487	3.4	532
Angola	1.6	349	1	273
Australia	44.1	280	40.2	267
Liberia	2.6	269	5.8	330
Central. Afr. Rep.	0.8	165	579	108
South Africa	0.6	155	367	122
USA	1.1	132	845	113
Guinea	0.6	116	533	109
Gambia	0.4	103	660	132
Sierra Leone	0.8	66	803	115
Switzerland	1.2	56	3.7	94

Source (Diamond High Council , Antwerp 1999) p. 11.

In addition to CSO purchases, diamonds come to Antwerp from major producers who have either no agreement or a partial marketing agreement with the CSO. An approximate estimate from this source is US \$600 million annually (1998). This figure is likely to increase in coming years due to a rise in production from newly discovered mines.³⁷ Major producers may sell their diamond output directly through their own marketing offices in Belgium. Most major producers, such as Argyle (Australia), ENDIAMA (Angola), Ashton (Canada), Broken Hills Properties (Australia) and Rio Tinto (USA) have their own sales offices or representing agents and brokers who are members of one of the diamond exchanges. A few producers such as ENDIAMA, Trans Hex (Canada) and Rex Diamond Mining Corporation (Canada) also have their *de facto* headquarters in Antwerp.

The Grey Market

The 'grey' or 'independent' or 'parallel' market in Antwerp consists of brokers, jewelers and retailers who are not directly linked to the HRD, are not members of the diamond exchanges and are not registered as importers or exporters of diamonds. It is a parallel market because diamonds are sold or bartered from one dealer to another, or from a manufacturer directly to the jewelry shop, often without invoices or paperwork. This market is 'grey' because it operates beyond the purview of the HRD. Producers such as Namco (Namibia), DiamondWorks (Canada), Southern Era (Canada) and MIBA (Government of DRC) sell most of their diamonds through independent dealers in Antwerp and some may supply directly to Belgian manufacturers, cutters and jewelers. The market operates outside the confines and therefore the monitoring of the HRD. The HRD takes the position that the quantity of diamonds exchanged in this 'grey' market is very small, but there are no statistics to verify the HRD position.³⁸

In 1998, the grey market came to the attention of a Belgian Parliamentary Commission of Inquiry into Organized Crime. The Commission's report contains an extensive chapter on the diamond industry and suggests that the grey market is far less marginal than the diamond industry and the HRD would suggest.³⁹

The Commission Report estimated that 4,000 to 5,000 commercial diamond dealers and brokers are active in the grey market, apart from the 3,500 registered members of the four diamond exchanges in Antwerp. Membership in a diamond exchange is voluntary and provides the benefit and privileges that are inherent to being 'inside' the industry. The advantage of remaining 'outside' the industry is the lack of industry-led regulation or monitoring.

While operating on the 'outside' is not illegal, the Parliamentary Commission Report took the position that the grey or parallel market is extremely vulnerable to infiltration and use by organized criminal groups.⁴⁰ The Commission Report listed 30 cases related to the Antwerp diamond industry that were under judicial investigation at the time of its report. The cases involved fraud, forgery, tax evasion, fake bankruptcy, laundering, contraband and theft. Ten of the listed cases were categorized under the heading 'organized crime' and the 20 remaining cases were classified as 'organizational crime'.⁴¹ The distinction appears to be that 'organizational crime' consists of criminal acts committed by criminal members of an otherwise legitimate business.

The Illicit Trade – The Black Market

The distinction made here between the white, grey and black markets are, to a large extent, artificial – boundaries and a separation of sourcing and trading in diamonds cannot be drawn this easily. Because of the high level of secrecy inherent in the Antwerp diamond trade, and the fact that there are few paper trails outside the HRD, it is difficult to fully determine the extent of the illicit trade.

Smuggling in the Belgian context refers to diamonds which enter Belgium without being declared to customs officials, and which are not licensed for import by the Ministry of Economic Affairs and the HRD Diamond Office. Neither the Government of Belgium nor the HRD have estimates of the quantity or source of smuggled diamonds. In addition, there are few active policies aimed at controlling diamond smuggling, apart from standard declaration and checking procedures of the customs department and the HRD. (Belgium, however, is perhaps the only country to have -

at least on paper - a monitoring system of imports and exports. In the Netherlands , for example, the procedures are even more cursory.)

It is known that most of the rough diamonds smuggled into Belgium are from Africa, and are likely to have been produced by artisanal diggers. These diamonds are sold from dealer to dealer, outside the purview of the HRD or the diamond exchanges. A number of smaller hotels in and around the area of Antwerp's Central Station are known trading places for illicit diamonds.⁴² In some cases, if the seller has enough, diamonds may be presented directly to a manufacturer. The manufacturer will undertake the cutting and polishing process, and the diamonds will subsequently be sold on the open market or to one of the many jewelry shops in the diamond district, or abroad.

On a small scale, African couriers bring in rough diamonds, without declaring them to customs or the HRD, and selling them directly to Antwerp-based dealers. An African diamond courier describes the process:

Smuggling is not risky and I have been doing it nearly my whole life. One just needs to have special contacts at home. My contacts will guarantee free passage at the airport at home and once you're on the plane the job is done. I am never checked for diamonds when I enter Belgium. To sell my diamonds I just go to one of the diamantaires in the Pelikaanstraat and present myself at the counter with my batch of stones. The diamantaires are always friendly and take me to a room in the back and serve me something to drink. They even offer to arrange for a place for me to stay in Antwerp.⁴³

The next step in the laundering process is not particularly expensive or risky for the diamantaire. As one writer puts it, 'A diamond becomes legal as soon as it is presented at a diamantaire's counter'.⁴⁴ A registered dealer and member of one of the diamond exchanges can simply mix illegally obtained diamonds with a parcel of already declared diamonds. This allows the diamantaire to both avoid taxes and launder the illicit diamonds.

The Real Source of Antwerp Diamonds

One of the factors which eases larger scale diamond smuggling and inhibits the tracking of diamond movements is the manner in which the HRD documents the industry. The HRD records the origin of a diamond as the country from which the diamond was last exported. Certificates of origin are not in use, except in a cursory manner for Angola. Therefore, diamonds produced in Sierra Leone, say, may be officially imported and registered as originating in Liberia, Guinea, Israel or the UK, depending on their journey from one trading centre to another.

The real issue of the Belgian environment, as it pertains to Sierra Leone or any other diamond producing country, is the lack of interest and therefore the lack of information on the true source of the diamonds entering the country. The Belgian diamond industry - and apparently the Belgian government - are basically not interested in the source of diamonds or how they get to Belgium. They are concerned only that imported diamonds pass through a dealer who is registered with the HRD, or through the HRD itself.

Official data from both the HRD and the Government of Belgium mask this issue, but at the same time serve a useful service in pointing out the significance of the problem. The two following tables illustrate the problem:

Table 5. Diamond Production in West African Countries for Selected Years
(000 carats)

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998
Sierra Leone	78	243	347	158	255	213	270	104	8.5
Liberia	100	100	150	150	100	150	150	150	150
Guinea	127	97	153	167	381	365	205	205	205
Ghana	650	700	656	591	740	632	715	830	800
Ivory Coast	12	15	15	15	84	75	302	307	307

Sources: Data for Liberia, Guinea, Ghana, Cote d'Ivoire for the years 1994-1998 from: Ronald F. Balazik, 'Gemstones', *1998 Annual Review* (United States Geological Survey, August 1999) p. EE 17. Remaining data for the same countries is from various mineral industry reports from 1990 to 1994 published by the United States Geological Survey. Sierra Leone data is from: Government of Sierra Leone, Government Gold and Diamond Office, Freetown, Sierra Leone, 1999.

Table 6. Antwerp Imports of West African Diamonds
Selected Years (000 carats)

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998
Sierra Leone	331	534	831	344	526	455	566	803	770
Liberia	5,523	658	1,909	5,006	3,268	10,677	12,320	5,803	2,558
Guinea	287	374	526	1021	875	780	439	533	596
Ghana	597	675	689	526	498	643	608	531	n.a.
Ivory Coast	825	946	868	683	605	1614	2214	885	n.a.

Sources: Diamond High Council, *1998 Annual Report*, Antwerp 1999, p. 1, and additional information supplied directly by HRD.

Comparison of the two tables shows that the production figures for Ghana and the HRD import statistics from Ghana are similar, as might be expected. For all the other West African countries, there are startling discrepancies. For example:

- while the Government of Sierra Leone recorded exports of only 8,500 carats in 1998, the HRD records imports of 770,000 carats;
- while the estimates of Liberian diamond mining output are between 100,000 and 150,000 carats in Table 5 (and there are no estimates anywhere of a capacity exceeding 200,000 carats per annum⁴⁵), the HRD records Liberian imports into Belgium of over 31 *million* carats between 1994 and 1998 - an average of over six million carats a year;⁴⁶
- Ivory Coast, where the small diamond industry was essentially closed in the mid 1980s, exported an average of more than 1.5 million carats between 1995 and 1997.

Among other things, these figures suggest either massive international fraud, or massive bureaucratic incompetence⁴⁷

Where Sierra Leone is concerned, the discrepancy between what the HRD says is imported from Sierra Leone and what Sierra Leone officially produces and exports may be an indication of what is illicitly mined and exported to Belgium. But this is only a *minimum* figure, as the data does not include diamonds which travel from Sierra Leone to India, Israel, Lebanon, New York and the De Beers CSO, *and then* to Belgium.

Belgian Import and Tax Legislation and Policy

One of the main factors making Belgium, and particularly Antwerp, the world centre for diamonds is the laxity of tax and trade legislation. Antwerp attracts a large quantity of diamonds sold on the 'outside market', i.e. outside De Beers CSO. For the purposes of this study, this outside market is very important and it helps to explain the problems in the Belgian environment.

The import of diamonds to Belgium is free, in the sense that there are no tax or import duties applied at entry. However, all diamonds must be declared to customs upon entry or exit from the country, and importers must (theoretically) pay a value added tax of 21 per cent on the customs value. The customs value, however, is simply the value expressed on the supplier's invoice. Belgium has a unique system of VAT exemption and most dealers can benefit from this provision in the law. A dealer is not required to pay the VAT at the time of import, but can settle it through the HRD Diamond Office at a later date. The Diamond Office will advance the amount to Belgian customs and invoice the dealer at the end of each month. Most dealers travelling abroad carry bank guarantees covering the VAT in the countries they pass through, without actually paying it.⁴⁸ When rough diamonds are exported for sale, the import VAT is recovered by the dealer, who is then tax-free.

There has been increasing concern that the Belgian diamond industry pays very little tax. In 1998 an industry with a turnover of US \$20.6 billion paid only US \$8 million in taxes. This has led to a new 'fiscal plan', worked out between the HRD and the Belgian Direct Tax Authority, that will ostensibly result in a tax contribution by the diamond industry of 'a fair share of taxes'⁴⁹. The new fiscal plan became effective on January 1, 1999, taxing the gross turnover margin of diamond companies. It is expected to significantly raise the amount of taxes paid by the industry.

Of greater interest where transparency and accountability are concerned, is the question of who actually monitors imports and exports on behalf of the government. Oddly, this role - the role of customs agent - is carried out by the HRD itself, the representative and lobbying institution for the Belgian diamond industry.

Upon entry into Belgium, sealed diamond parcels are sent by customs to the HRD Diamond Office, which acts as the internal clearance and customs bureau on behalf of the Government of Belgium. At the HRD Diamond Office, all diamonds entering or leaving the country are individually checked by ten diamond experts who are employees of the HRD, acting on behalf of the Licensing Department of the Ministry of Economic Affairs. Importers and exporters must provide invoices describing the exact weight and price of the diamond parcels and documents showing their company registration in Belgium or Luxembourg. Diamond Office experts are not civil servants. They are experts employed by the Diamond Office, sworn in by the Belgian Minister of Economic Affairs.⁵⁰ The only outside check on this process is that there are always a number of customs officers and

representatives of the Ministry of Economic Affairs present at the Diamond Office to monitor the procedure.

The Diamond Office therefore plays a dual role: it provides a lobbying service on behalf of its clients in the diamond industry, *and* it acts as their watchdogs on behalf of government. To the outside observer, this looks like a major conflict of interest.

Difficulties with the process are legendary:

- diamonds imported from other countries of the European Union, need not be declared at the Belgian border, but need only to be checked by the HRD Diamond Office. Different valuing and controlling applications by EU members leads to additional problems. The Netherlands, for instance, applies a different weighing system, enabling importers to declare a certain amount of low quality rough diamonds and then alter it, before exporting, with high quality gems of the same weight. The diamonds may then be invoiced at a lower price than the real value;⁵¹
- in most cases the penalty for the fraud involved in inconsistencies between invoice and real value is minimal. The diamantaire risks a fine but will normally receive questionable diamond parcels back when a corrected invoice is received from the seller.

The historical reason given for having the HRD Diamond Office act as an agent for the government is that only the diamond industry has the expertise required to perform the government's task. However, in recent years there have been a number of judicial inquiries which have shown that the system violates almost any definition of neutrality, and is an invitation to corruption.

Cases of fraud in the Antwerp diamond and banking trade are legendary. In April 1999, for example, an expert of the HRD Diamond Office was arrested in connection with a million dollar import-export fraud involving the expert, a number of diamond exporting companies and a specialized diamond transport company. The expert overvalued diamond parcels, enabling a number of diamond companies to use a fraudulent invoicing system and then to launder illegally obtained diamonds with the 'licensed' documents.⁵² Another case exposed two experts of the Diamond Office when customs officials double-checked a parcel inspected and sealed by the HRD Diamond Office, on its way to an unknown customer. The transaction was registered for a value of US\$ 5 million, but the parcel contained only brick dust.⁵³ Fraudulent transactions like these allow diamond dealers to use legitimate documents for other purposes, such as unchecked diamond exports, VAT fraud or the laundering of illegally imported diamonds.

The Diamond Bourse

Of the twenty-one diamond exchanges (bourses) in the world, four are in Antwerp, including the only rough diamond bourse. The bourses are transaction centres where traders meet individually to present their diamonds and negotiate sales. The bourses are highly secured exchange buildings in the heavily

guarded diamond district of Antwerp. Access to a bourse is allowed only to fee-paying members, and membership is restricted to individual dealers or companies registered in Belgium or Luxembourg. Candidate members have to be recommended to the Board of Directors and need support from a number of existing members. Non-members are only allowed to enter the transaction room of the bourse in the presence of accompanying members, and only then if they have approval from the Board of Directors.

A deal at a bourse is struck without formalities or paperwork. However, there exists a set of strict rules applied by the bourse. The buyer inspects a parcel of diamonds on offer and negotiates the price per carat with the seller. When a broker negotiates a transaction, the price stands for only one day - until the closure of the bourse. In the meantime, the parcel - a small envelope - is sealed and the negotiated price is written on it. When, or if the seller wants to renegotiate the broker's price, or when the buyer fails to pay within the one-day deadline, the parcel ('cachet') can be reopened, but only in the presence of a Transaction Room Committee of the bourse.⁵⁴

Despite the extraordinary amounts of money changing hands and the potentially high risks involved, diamond dealers and their financiers rarely settle differences in legal courts. The exchange system has its own internal procedures and sanctions system based on hundreds of years of tradition. The obvious advantage for the diamond industry is the maintenance of complete confidentiality, a minimum amount of monitoring and paperwork, and exclusive control of the diamond market.

Box 4. Diamonds and Drugs: the Collapse of the Max Fischer Bank

In January 1997, the Max Fischer Bank, in the heart of the Antwerp diamond district, declared bankruptcy. A few months after the bankruptcy the Antwerp prosecutor opened an investigation, and in June 1997, three members of the bank staff were arrested and taken into custody.

The bankruptcy and subsequent judicial investigations created a near panic in the Antwerp diamond business. After the arrests, several diamond dealers' offices and the HRD Diamond Office were searched.

Investigations into the bankruptcy inadvertently led to the activities of Fouad Abbas. Abbas had been a crown witness in a Dutch narcotics investigation, and was accused of being the key supplier of marijuana to European and Canadian markets in a case that involved thousands of tons of drugs. Abbas confessed his own role under a witness-protection programme in the Netherlands, but Belgium nevertheless demanded his extradition, after he had moved to London. The Max Fischer Bank in Antwerp had been used to launder an estimated US \$25 million of the proceeds of Abbas' criminal business. Abbas was not unknown to the Antwerp diamond business. He ran his operations through a diamond company by the name of TTS Diamonds and reportedly had mining interests in West Africa. Some of Mr. Abbas' partners, it was later revealed, were also active in arms trafficking. Iraq and UNITA in Angola were allegedly the recipients of the Abbas arms.

Systematic tax evasion and Belgium's policy of fiscal and administrative leniency for the diamond business were the combination that enabled Abbas to thrive for many years.

Source: Confidential interviews with Dutch television journalists who had documents related to Abbas companies. Also Chris de Stoop, *Ik ben Makelaar in Hasj*, Amsterdam, De Bezige Bij, 1998

Diamond Banking

Like the rest of the diamond business in Antwerp, banking arrangements are opaque, and the small number of players have an immense amount of economic power. There is likely to be less transparency than in other banks in the world as these financial institutions have their own fiduciaries in Switzerland or Luxembourg, where banker's discretion is guaranteed by law. Ninety per cent of all diamond transactions in Antwerp are handled by two banks - the ABN Amro Bank and the Antwerpse Diamantbank. De Beers holds 12.8 per cent ownership in the Antwerpse Diamantbank through the Henfin Holding Company.

Traditionally, most trading or marketing companies in Antwerp have maintained a very low level of capitalization. It is not exceptional to find a diamond company with a capitalization of only US \$30,000, but with an annual turnover of several million dollars. Consequently, short-term and rapid financing is critical to the business. Diamond traders depend on short-term financing in the millions of dollars for single transactions, enabling them to bridge the period between the time of their own purchases and payment by their clients.

The lack of transparency and questionable business practices of some of the diamond banks, and spectacular scandals like the Max Fischer Bank collapse, have led to increasing debate in Belgium on the nature of the diamond business and its relationship with organized crime.

The Underbelly of the Belgian Diamond Industry

Because of governmental and HRD laxity, Antwerp has, in recent years, become one of the key cities of the world for Russian organized crime.⁵⁵ One of the most spectacular public cases involved the embezzlement of US \$180 million in gold and diamonds from the Russian State reserves.

Andrei Kozlenok and his company, Golden ADA, were at the centre of a transcontinental scandal, causing embarrassment to authorities in the USA and more so in Russia. Kozlenok's company was provided with gems from the Russian State Precious Metal Reserve, with the approval of high officials in Russian government circles. Instead of using the diamonds intended - as collateral for a commercial loan in the US - Kozlenok sold US \$70 million worth of diamonds in Antwerp, with forged documents claiming the diamonds had originated in the DRC (Zaire). Kozlenok also had a company registered in Belgium, beyond the reach of both Russian and American authorities. For three years, Russia battled in California courts in order to bring Kozlenok to trial and recover the gems. In 1998, Russia authorities finally succeeded in extraditing Kozlenok from Greece.⁵⁶

Kozlenok's name appeared again in a seemingly unrelated fraudulent incident. The fraud involved a million-dollar trade in fake invoices. Antwerp businessmen and local politicians (members of the Antwerp City Council) were among the accused. Several individuals were convicted on a number of charges, but the full nature of the fraudulent mechanism remains hidden. Some of the investigators and financial experts analyzing the case have suggested that large amounts of diamond profits or credits were at the heart of the fraud.⁵⁷

Conclusion

Antwerp is the most important 'final' marketing site for the bulk of the world's diamonds, including those of Sierra Leone. Unfortunately, the political, fiscal and law enforcement environments makes Antwerp a diamond smuggler's dream. Even in the most overt cases of questionable behaviour, little is done. Government officials informed the Project Team that while the Customs Department in Antwerp does report, on average, ten cases of fraud annually to the Ministry of Economic Affairs Diamond Monitoring Department, the majority of these cases are judged to be 'administrative errors' on transport documents and invoices. In most cases, the supplier or the recipient in Antwerp is simply contacted to produce corrected documents.⁵⁸ Such 'findings' obscure the magnitude and seriousness of institutionalized smuggling, diverting attention from a major international problem to small-time criminals.

The lack of official concern may stem from the overall economic importance of the diamond industry to the Belgian economy. The result, however - a lack of the legislative controls that are accepted as normal and necessary in other business environments and in other countries - is devastating for diamond producing countries like Sierra Leone. Contributing factors include:

- a serious apparent conflict of interest between the HRD's responsibility to its membership and its responsibilities to government for critical elements of supervision over that same membership;
- encouragement - through government and private sector lack of interest in the source of imported diamonds - of what appears to be either massive fraud or massive bureaucratic incompetence in diamond import statistics;
- encouragement of a secretive environment which permits corruption at high levels (such as the Max Fischer Bank collapse, cases of fraud within the HRD, and opportunities for organized crime).

4. THE SIERRA LEONE DIAMONDS

4.1 Origins

Sierra Leone diamonds were discovered in Kono District in 1930, when a small geological survey team led by N. R. Junner and his assistant, J. D. Pollet, picked up a crystal by the Gboraba stream. The team had been examining stream-bed gravels for heavy minerals; instead the crystal turned out to be a diamond. The next day, the team found another diamond at the same site. Their discovery was extraordinary. The Sierra Leone colony, Britain's first in West Africa, had been suffering from economic stagnation and depression for nearly a century because of its dire lack of resources. But their discovery, which was duly reported to the colonial authorities, elicited little interest until Junner brought it to the attention of the De Beers-controlled Consolidated African Selection Trust (CAST), based in the Gold Coast (now Ghana). A prospecting party from CAST arrived in the country in March 1931; that same month, the first hint of the widespread nature of diamond occurrences in Sierra Leone was received when Pollet found two more diamonds in the gravel of Kenja stream, near Pava, about 50 miles south of the original discovery.

Given the chaotic nature of Sierra Leone's diamond industry in the 1990s, it is easy to forget that all the country's diamond fields, estimated to cover an area of some 7,700 square miles in 1968, was officially under corporate control for over two decades. In 1935, the colonial authorities concluded an agreement with the Sierra Leone Selection Trust (SLST), a subsidiary of CAST, which gave the company exclusive mining and prospecting rights over the entire country for 99 years. In return, SLST was to pay income tax at the rate of 27 per cent (later increased to 45 per cent) on its profits, in addition to a small 'special development' fund, mainly for the Kono region.⁵⁹ This was not difficult to arrange, as Kono District had never been a commercially active region and Kono chiefs, who owned the land communally, appeared unconcerned and unable to grasp the dramatic impact that diamond mining would inevitably have.

Corporate control was relatively easy to establish as far as dealing with the local authorities was concerned; and in the four years after mining intensified (1948-1952), SLST paid over £3 million in taxes to government.⁶⁰ The threat to De Beers' control came not from local authorities, but from far more insidious and uncontrollable forces, forces so powerful that they eventually forced an end to the company's monopoly in 1956. By the early 1950s, a huge influx of illicit miners - attracted, no doubt, by internal SLST theft - had nearly overrun the company's holdings. By 1956, there were an estimated 75,000 illicit miners in Kono District, leading to smuggling on a vast scale, and causing a general breakdown of law and order.

The buyers and smugglers of illicitly mined diamonds at that time were mainly Madingo traders from neighbouring West African states, and Lebanese traders. The Lebanese had first arrived in Sierra Leone at the close of the 19th century. With the rise of the diamond industry, they soon emerged as major players on the illicit side because of their ability to raise significant capital, and because of their outside contacts. Initially, the smuggling route was from Freetown to Beirut and then to European markets. But with the tightening of security between Kono and Freetown in the early 1950s, Lebanese smugglers began moving their goods across the Mano river to Liberia. Antwerp, and then Israeli-based diamond merchants soon noticed the booming diamond trade in Monrovia, and

many established offices there, rather than in Freetown where the De Beers' monopoly made it illegal to do so. De Beers itself was forced to set up a buying office in Monrovia in 1954 to keep as much of the trade under its control as possible. The impact of smuggling on the Kono mining areas was immensely destabilizing. According to Koskoff,

Large combines of diggers emerged, now with more elaborate equipment, with financing from buyers in Monrovia or from local Lebanese. The illegal industry was taken over by toughs. Itinerant buyers were occasionally murdered by hard-pressed diggers. According to one source, by 1954 forty murders had already occurred in the diamond areas, including one case of a digger who had been disembowelled in search of a stone that he had been seen to swallow.⁶¹

This was the 'Great Diamond Rush'. John Cartwright has provided an insight into its socio-political and economic impacts on the country as a whole. At the time of the Rush, the total number of persons calculated by the Labour Department to be in wage employment was between 75,000 and 80,000. This meant that within a period of just three years 'as many men (75,000) left [their homes]...to search for diamonds as had left it over a half century to seek wage employment.'⁶² This had a radical impact on the process of social mobilization. By 1955, the Director of Agriculture attributed a marked drop in rice production to the Rush, many of the young men having abandoned the rice fields for the more interesting and promising diamond mines. By the end of the 1950s, Sierra Leone - once a net exporter of rice - became a net importer.

The influx of these uncontrollable young men soon had the district verging on 'anarchy, with armed bands of as many as 400 to 500 men raiding SLST...areas, and on occasion doing battle with the police.'⁶³ A detachment of the Sierra Leone Police Force had been stationed in Kono in 1952, the first such posting outside of Freetown. But it was severely ill-prepared to deal with this unexpected problem. The force launched military-like campaigns with names like 'Operation Parasite' or 'Operation Stranger Drive,' targeting every unregistered non-Kono in the District, in an effort to curb the massive influx of illicit miners. Most of these efforts were dismal failures. It was estimated that in the first half of the 1950s, more than half of Sierra Leone's diamonds were being sold in Monrovia as 'Liberian' diamonds, the country having created fictive 'mines' in the jungles to account for this enormous production.⁶⁴

The situation was highly problematic for De Beers, representing a crisis comparable only to the Second World War which forced the closure of its premiere mines in South Africa. De Beers resorted to the employment of private security.

4.2 The Beginning of Privatised Violence

Most recent writing on private security firms and the 'Dogs of War' views them as a product of post-Cold War collapse among African states.⁶⁵ In Sierra Leone, however, private security is not a new phenomenon. More particularly, it initially had nothing to do with state collapse or the highly destructive rebel warfare that later marked the country. The first use of private security in Sierra Leone was in the 1950s, and was directly sanctioned by the head of De Beers, Sir Ernest Oppenheimer. Alarmed by the widespread theft in SLST's mining areas and the consequent massive

smuggling operation, in 1953 Oppenheimer contracted a retired British counter-intelligence agent, Sir Percy Sillitoe, to organise an intelligence operation aimed at getting at the root of the smuggling. The operation later blossomed into the full-scale deployment of a private security force aimed at halting both the pilfering and smuggling. Sillitoe confirmed that smuggled Sierra Leone diamonds were travelling through Monrovia, where European and Israeli firms had established offices and were funding African smugglers. The diamonds moved then to Belgium and to the Soviet Union, which then badly needed industrial diamonds to retool its factories.⁶⁶ Sillitoe's army was known as the Diamond Protection Force (DPF), and it was led by white soldiers of fortune from Rhodesia and South Africa. An account of how the force operated is provided by Michael Harbottle, a former British army officer who took over command of the force after Sillitoe. Although they did not have firearms, the DPF used sophisticated technology, including light plane (and later helicopter) patrols, radio communications, floodlighting and booby traps. They even mined border crossings in an attempt to bring down illicit miners and smugglers. Illicit miners - known as 'san san boys' - and smugglers captured by the mercenaries were likely to be imprisoned (one could earn a year's hard labour for the mere possession of mining implements) but there were occasions when miners were shot to death.⁶⁷

In 1956, Sillitoe hired a Liberian-based Lebanese adventurer, Fred Kamil, who later wrote about his adventures. Kamil had independently started a low-intensity warfare against smugglers after one cheated him when he was a businessman in Liberia. Kamil recruited a gang of armed toughs from the streets of Monrovia. The group launched a small-scale guerrilla war along the Liberian-Sierra Leonean border, ambushing diamond smugglers, overpowering them and stealing their goods. Sillitoe offered the outlawed Kamil an attractive deal: his undercover agents would supply the Lebanese with information about the exact movements of the smugglers; in return, Kamil would turn the diamonds over to De Beers and receive one-third of their value in cash. Kamil agreed, since this obviously meant Sierra Leone police protection. The risk became too high for the smugglers, and the colonial authorities in Freetown added a carrot: export taxes on diamonds were lowered, and De Beers increased the buying price. For a time, smuggling seemed to have been contained.⁶⁸

But illicit mining continued. The colonial government, under more and more pressure from nationalist politicians (this was the period of decolonization), decided to act more radically to put the situation under control and to satisfy calls for legitimate indigenous participation in the booming diamond industry.

4.3 The End of Corporate Control and the Emergence of the 'Shadow State'

By the 1950s, diamond mining, once confined to Kono District and Tongo Field in Kenema District, had spread to much of the Eastern Province and Bo District. Digging followed the route of the Sewa, a wide river flowing from Kono through Kenema to Bo District, and covered an area of 19,000 km², about one-quarter of the entire country. SLST operations were based in the most productive areas, mainly in Kono and Tongo Field. These areas were the hardest hit by the destabilising effects of illicit mining, but other parts of the country were affected. In Bo, a district which, unlike Kono, was relatively developed and urbanised, the issue of SLST control created divisive political controversy.

In 1955, the colonial authorities concluded an agreement with SLST which scrapped its monopoly and confined its operations to Yengema (in Kono district) and Tongo Field, an area of about 450 square miles, in return for £1.6 million in compensation. In 1956, the authorities introduced

the Alluvial Mining Scheme, whereby both mining and buying licenses were granted to indigenous miners. All mining areas were declared to be government property and the government appointed an inspector of mines who, after consulting local authorities, would issue one-year mining licenses to any Sierra Leonean (or a firm controlled by Sierra Leoneans) for a fee of £9. Each license area was to employ a maximum of 20 people. License holders had also to pay a fee of 4 shillings a week (slightly higher than that paid for the license itself) to local authorities (the chiefs) known as 'surface rent'. They might also be called upon to pay compensation for crops destroyed in the course of digging. Dealer licenses were to be issued at £25, but unlike the mining licenses, they were not restricted to Sierra Leoneans. Many of these licenses came to be held by Lebanese. The first mining licenses under the scheme were issued in Lubu chiefdom, Bo District, on 6 February 1956. Within a single month, 1,500 licenses had been issued.

For a time, the Alluvial Mining Scheme seemed to be a success. The diamond rush was put under control, mining areas were stabilized and De Beers' Diamond Corporation Sierra Leone (DCSL) opened buying offices in Bo and Kenema, in addition to the one they had in Freetown. Although legal sales of diamonds may have increased significantly, most of the licensed dealers - mainly Lebanese - continued to export illegally. Still, as one writer put it at the time, the scheme created an economic boom for the country as a whole: 'Markets were built and communications improved. Shopkeepers and craftsmen did good business. New houses and cars symbolized the new wealth earned in the diamond industry.'⁶⁹

The Alluvial Diamond Scheme stabilized the diamond industry somewhat for about a decade. Sierra Leone gained its independence in 1961, but the party which took power, Milton Margai's Sierra Leone Peoples Party (SLPP), a gradualist and conservative political movement, had ruled in partnership with the British since 1952, and governed in much the same way as the British. By 1968, over 30 million carats of diamonds had been produced in Sierra Leone; the gems had generated about US \$200 million for the country's economy, and provided about 70 per cent of the country's foreign exchange reserves. Nevertheless, it has been estimated that as much as half of the country's diamonds were still smuggled out, largely by Lebanese.⁷⁰ The challenge to this uneasy stability - and indeed to Sierra Leone's formal bureaucratic state - came from a political movement which ousted the SLPP at the close of the 1960s: the All Peoples Congress (APC), founded by Siaka Stevens, a former police constable and trade unionist.

Stevens broke away from the SLPP and founded the APC shortly after Sierra Leone's independence, claiming that the Margai-led party was overly conservative and elitist, and that it was still British-controlled. As Minister of Mines with oversight of the diamond industry during much of the turbulent 1950s, Stevens had been firmly on the side of corporate control of the important diamond resources. But now in opposition, he campaigned on a populist platform calling for a greater share of SLST's holdings for the 'common people.' His new party claimed to stand for a welfare state based on a socialist model in which all citizens, regardless of class, colour or creed, shall have equal opportunity and where there shall be no exploitation of man by man, tribe by tribe, or class by class. Stevens recognized early, in large part due to his trade union background and his intimate knowledge of miners, the potential support base among the huge army of illicit tributors and miners in the diamond regions. His party appealed to this group and promised greater protection for them, as mining of this nature - however illicit in the eyes of the authorities - represented 'the little man's only hope for wealth'.

Stevens' populist rhetoric clearly emboldened illicit miners and transformed their criminality into an ideological battle. With defence of their illicit activities by a major politician, miners began to regard SLST as a predator, and a hated foreign predator at that. Soon after Stevens became prime minister in 1968, illicit mining, once largely subdued, again became a serious menace for SLST, with outright hijackings of their gravel trucks by armed illicit miners, some of whom even dug up highways and airfields in the rapacious hunt for diamonds. SLST increased its defence force to 1,200 men, but to no avail.

The situation became so intolerable that by 1970, SLST abandoned all prospecting efforts, because anything it discovered was soon likely to be stolen. This played into Stevens' hands: the Prime Minister was eager to gain direct control over SLST's rich holdings, and he exploited SLST's frustrations to achieve his ambition. In addition, from his earliest years in office, he was linked to criminal or near-criminal elements. On November 3, 1969, SLST's monthly haul of diamonds, valued in Sierra Leone at US \$3.4 million, was stolen at gunpoint as it was about to be flown out of the country at Hastings airport. The theft was professionally executed and the thieves were never caught. Attempts to prosecute a few suspects ran into serious difficulties: potential witnesses were spirited out of the country by the police, the judiciary was curiously disinterested, and the case was eventually dropped. It was rumoured in Freetown that Stevens and a Sierra Leonean-born Lebanese businessman Jamil Said Mohamed (well-known simply as Jamil) had masterminded the theft. Jamil's chief rival, another Lebanese named Hanneh Shamel, was expelled from the country for alleged links to the thieves; the stolen diamonds were allegedly sold in Europe for US \$10 million and Jamil emerged as a major player in Sierra Leone's diamond industry.⁷¹

In 1971, Stevens announced the formation of the National Diamond Mining Company (NDMC) which effectively nationalized SLST. The new company took over 51 per cent of SLST's shares and SLST retained 49 per cent. The NDMC was to be run by a board of directors composed of 11 members, six nominees of the government and five of SLST, but in fact all important decisions were made by the Prime Minister. To ensure that he had a reliable front man in the new arrangement, Stevens arranged for Jamil - who in 1959 had been sentenced to six months in jail for unlawful possession of diamonds - to take over 12 per cent of the government's shares. SLST's diamond shipments dramatically declined soon after. With Stevens' active participation, Jamil's men were stealing and smuggling as much as they declared.⁷² From a high of over two million carats in 1970, legitimate diamond exports dropped to 595,000 in 1980 and fell to only 48,000 carats in 1988.

During this period, De Beers attempted to manage the growing informal market by using its Monrovia purchasing office to purchase smuggled Sierra Leonean diamonds in dollars,⁷³ a practice which probably continued over the years. Stevens' underground economy, however, the 'Shadow State', was by now firmly in place. In 1984, SLST sold its remaining shares to the Precious Metals Mining Company (PMMC), a company controlled by Jamil, and in 1986, PMMC terminated its management of the NDMC on grounds that it was no longer viable. The timing was significant: Stevens retired in 1985, handing over power to Major-General Joseph Saidu Momoh.

4.4 The Failure of 'Reform'

Momoh came to power promising to wage war on 'profiteers, hoarders and smugglers,' precisely the types of forces upon which Stevens' 'shadow state' rested. Shortly after taking office, the new

president set up the Government Gold and Diamond Office (GGDO) to replace the PMMC. The GGDO was to 'examine, sort, value, parcel, market and export gold diamonds', but its real function - in large part because the government was severely cash-strapped - was mainly the valuing of diamonds and gold for export, so that taxes and duties could be levied. The GGDO was to receive one per cent of the value of each diamond submitted, and the government two per cent. A firm of international consultants, Diamond Counsellor International, was contracted by the government to fly to Freetown at least five times a year to audit and 'advise' the GGDO.

With the collapse of the NDMC, formal sector diamond mining became less and less important, and wage-earning virtually ceased. Where once wage-earning miners at least had been members of the United Mineworkers Union, the actual mining - even where legal - was now managed on a tributor basis, with payment based on a percentage of whatever was found. While formal sector mineworkers in rutile, gold and other minerals were members of, and represented by the Union - even through much of the 1990s - there was not a single diamond miner in the union at the end of 1999 (see also Section 6, below).

Momoh's 'New Order' began to show early signs of cracking, however. For one thing, his government was dominated by leftovers of Stevens' discredited regime. The GGDO's first chairman, for example, Joe Amara Bangalie (who doubled as minister of Finance, Economic Planning and Development), was a long-time Stevens' minister, with a reputation for extravagant corruption. Not surprisingly, Bangalie soon brought Jamil back as key player in the GGDO. In January 1986, Bangalie announced that the new GGDO had accepted a loan of 100 million leones (about US \$25 million) from Jamil to help run it. The diamond office was now to rely on the 'professional competence' of the Lebanese mogul for its operation.⁷⁴

4.5 Lebanon, Israel and the Arrival of International Organized Crime

Up to the early 1970s, the informal diamond industry was dominated by two Lebanese communities - Maronite Christians and Shi'ite Muslims. Once Stevens had begun to sideline De Beers, however, the Lebanese became increasingly involved on the formal side, or what was left of it. From the late 1970s to the early 1990s, aspects of Lebanon's civil war were played out in Sierra Leone. Because all Lebanese militia needed financial assistance, Sierra Leone's diamonds came into play as a kind of donor base or informal tax on behalf of one faction or the other. This was of great interest to Israel, not least because part of the Sierra Leonean Shi'ite community actively supported the Amal faction, which on the one hand fought against Israel's greatest enemy, Hezbollah, and on the other was Syria's main ally against Israel. It could not have been lost on Israel that the leader of Amal, Nabih Berri, had been born in Sierra Leone and was a boyhood friend of Jamil, the most influential man in the country's diamond business.

It was largely through Berri that Iran became interested in Sierra Leone, building a large cultural centre in Freetown and making the country its main base in West Africa, to the further discomfort of Israel, which had been trying unsuccessfully to restore ties with Sierra Leone, broken during the Arab-Israeli war of 1967. In a dramatic move, Jamil persuaded Momoh to invite the Palestinian leader Yasser Arafat for a state visit to Freetown in 1986. In Freetown, Arafat offered several million dollars to Momoh in exchange for a training base for his PLO fighters, an offer which Momoh, alarmed by aides to the danger, turned down.⁷⁵ It was the beginning of the end of Jamil's

power in Sierra Leone. Lobbyists for Israel began actively to prod Momoh towards stronger ties with Israel and to end Lebanese dominance. In 1987, President Momoh announced that he had foiled a coup plot involving Jamil, his own Vice-President Francis Minah (a close associate of Jamil) and a few lower ranking soldiers and police. Minah was tried for treason and hanged. Jamil, who was out of the country at the time, remained in self-exile for the duration of Momoh's tempestuous regime.

The foiled 'coup' allowed Momoh to create his own partnerships, and Israel, long anxious to get the Lebanese away from Sierra Leone's diamond wealth, came in handy. One of the first to arrive was the Russian-born Shaptai Kalmanovitch and his Israeli-based enterprise, the LIAT construction and Finance Company.⁷⁶ LIAT's assets did not amount to much. Most of its contracts were with government, including a low-cost housing scheme in Freetown which never got started. Kalmanovitch's main interest was diamonds, and perhaps drugs. Among other things, Kalmanovitch set up a diamond buying office in Freetown. At first, the partnership appeared to be beneficial for the diamond industry, and exports increased by 280 per cent in late 1987. Illegal production and exports however, did not decrease accordingly, and it was discovered that Kalmanovitch was using Sierra Leone to circumvent the weapons, diamonds and gold embargoes on South Africa. Kalmanovitch was also thought to have connections to the Israeli intelligence apparatus and to have played an advisory role in Israeli politics.⁷⁷

While in Sierra Leone, Kalmanovitch brought in other money launderers, drug traffickers and arms dealers, all scrambling to gain access to diamonds. In 1986, Marat Balagula, considered the 'Godfather' of Russian mafia in Brooklyn, N.Y., found a safe haven in Sierra Leone and was known to be operating with Kalmanovitch. Balagula was considered one of the initiators of the Antwerp operations of the Russian Mafia. He and Kalmanovitch became involved briefly in the importation to Sierra Leone of gasoline, in a deal reportedly backed by a fugitive American businessman, Marc Rich, and guaranteed by the Luccheses, an old-time American crime family.⁷⁸

Two others, Boris Nayfeld and Rachmiel 'Mike' Brandwain, both active in the Antwerp underground, met with Kalmanovitch and Balagula in Freetown in 1987. Brandwain at that time ran a small electronics store near the diamond district of Antwerp and was involved in tax-free export transactions with Eastern Europe. Before his trip to Sierra Leone, he had been released on bail for a gold smuggling deal between Luxembourg and London. He was also involved in M&S International, an intercontinental brokering and wholesale business allegedly involved in laundering and trafficking activities, including heroin trafficking and diamond smuggling. M&S maintained its headquarters in Belgium until the mid-1980s. Investigations of Brandwain's operations are still continuing.⁷⁹ Brandwain's part in the story ended when he was shot to death in a parking lot in the centre of Antwerp, near the diamond district where he kept his headquarters.

Shortly after the Sierra Leone meeting, Kalmanovitch was arrested in London in 1987 on an American warrant. He stood trial in a case involving forged cheques and was released on bail six months later. Kalmanovitch was reportedly expelled later from the South African 'homeland' of Bophutatswana and arrested in Israel, where he stood trial as a spy for the Soviet Union. He was released in 1993 and is currently thought to be living in the Baltic region.

The fourth person at the Sierra Leone meeting, Boris Nayfeld, was released in 1998 from an American prison where he spent four years for his involvement in heroin trafficking between Thailand and New York. Prior to his arrest, Nayfeld had been living in Antwerp.⁸⁰ Balagula remains

imprisoned in the U.S. for credit card fraud and for the evasion of US \$85 million in taxes on the sale of almost a billion gallons of fuel sold between 1983 and 1988.⁸¹

A more credible and better organized Israeli company appeared in Sierra Leone soon after Kalmanovitch's arrest. The N.R. SCIPA Group, owned by Nir Guaz (known as 'The Skipper'), set up diamond buying offices in Freetown and Kenema, offering vastly improved prices for diamonds and in the process further marginalizing the capricious Lebanese dealers. SCIPA continued a LIAT enterprise, importing rice and machinery and selling it at low prices. A loan from SCIPA also helped Momoh settle some of the country's outstanding arrears with international donors. The IMF was so impressed with Momoh's apparent reforms, including further efforts to cut Lebanese interests out of the diamond business, that it offered half a billion dollars in assistance to the country in 1990. The relationship with SCIPA was a rocky one, however, with the company allegedly financing both legal and illegal diamond exports.⁸² Despite considerable mining activity, the company exported only US \$6 million worth of diamonds in 1989, reportedly far below SCIPA's actual performance and considered to be something less than two per cent of national production.⁸³

By 1991, The Skipper was gone, and Momoh was desperately seeking new foreign firms to generate revenues in a climate of massive corruption and economic free-fall. Joint ventures proliferated, most of them leading nowhere. The RUF war began that year, with rebels attempting to cut Momoh off from the Kono diamond fields. In April 1992, he was overthrown in a military coup.

Led by a 27-year old army Captain, Valentine Strasser, The National Provisional Ruling Council (NPRC) came to power on a promise to end corruption. As Reno puts it, however, the real news in Strasser's ascension to power lay not in his commitment to reform.

Instead, he and his associates concentrated on conquering what they believed their control of State House entitled them to. As the inherited technocrats from the old regime issued promises to the IMF, Strasser's troops were already mining diamonds in Kono in exchange for weapons from Belgium and Romania... Unlike Momoh and his associates, these coup leaders had been raised in Freetown's slums... As before, [however], the leader [engaged] in private dealings to achieve [his] control. In Strasser's case, this allegedly involved the private export of 435 carats of diamonds to Sweden in 1993.⁸⁴

4.6 The Liberian Connection

Liberia's dealings in stolen Sierra Leone diamonds have been a major concern to successive Sierra Leone governments since the great diamond rush of the 1950s triggered massive smuggling of the country's gems through Monrovia. Monrovia's attraction to smugglers include its porous borders, the US dollar - which was legal tender in Liberia - and the relatively higher, untaxed prices offered by dealers who established offices there in order to buy smuggled Sierra Leone diamonds. In the 1950s, it was estimated that 20 per cent of all stones reaching the world's diamond markets were smuggled from Sierra Leone.⁸⁵ Liberia itself has relatively negligible diamond potential, and by 1985 prospectors and diamond experts had all but given up on future investments. Where diamonds were concerned, Liberia had become little more than a fencing nation, creating fictive mines as cover for the immense laundering of diamonds smuggled from other nations, mainly Sierra Leone.

What is different and more sinister today is the active involvement of official Liberian interests in Sierra Leone's brutal war - for the purpose of pillage rather than politics. Initially, Charles Taylor backed the RUF in an effort to destabilize the Momoh regime, which had allowed ECOMOG to use Freetown as a staging base for its peacekeeping efforts in Liberia. Since launching his military campaign to seize power in 1989, however, Taylor has operated a rapacious and sometimes criminal national enterprise, looting Liberia's forest resources (mainly timber and rubber) with the active involvement of foreign companies and criminal elements considerably more dangerous than those engaged by Joseph Momoh. Diamonds have played an active role both in financing Taylor's own expansionist enterprise, and in bringing Sierra Leone to its knees.

In 1988, before Liberia erupted, the country exported US \$8.4 million worth of diamonds, including a great many smuggled Sierra Leonean diamonds. In 1995, when Liberia lay in ruins and economic activity was almost non-existent, it exported US \$500 million worth of diamonds, according to HRD statistics. This is more or less supported by IMF trade returns which show estimates of Belgian imports from Liberia at US \$309 million in 1994 and \$371 million in 1995.⁸⁶ A large proportion of these are rumoured to have originated in UNITA-held Angolan territory (Taylor has maintained close links with UNITA leader Jonas Savimbi), and certainly a very high proportion originated in Sierra Leone.⁸⁷ There is also rumoured to have been Russian dumping of industrial diamonds in the Monrovia market during the period.

In February 1999, the London *Times* reported that the UN and 'western intelligence agencies' were investigating the probability that an international criminal consortium of diamond dealers and cocaine traffickers were behind the attempt by Taylor to seize Sierra Leone's diamond fields through their RUF proxy. The paper named Col. Fred Rindle, a South African 'neo-Nazi' and a former spokesperson for the far-right South African *Afrikaner Weerstandsbeweging* (AWB), and Nico Shefer, an Ecuadorian who was once in business with Colombian drug baron, Pablo Escobar, the Colombian cocaine lord. These two, the paper said, were the main figures in the consortium behind the RUF, reinforcing the rebels with 300 Ukrainian mercenaries and hundreds of soldiers from Burkina Faso. Quoting an intelligence source, the paper said 'The interests of Taylor and his crew are clearly not political. They are after Sierra Leone's diamonds. They want to establish a puppet regime and then run the country as a criminal exercise.'⁸⁸

British newspaper accounts in January 1999 reported that late the previous year the RUF had contracted two British companies operating 'ageing' Boeing aircraft to transport AK 47 rifles and 60 mm. portable mortars to rebel-held territory in eastern Sierra Leone. The 40-ton consignment of arms, from Bratislava in Slovakia, was undoubtedly acquired with diamond resources. The arms were crucial in the RUF's successful and highly destructive attack on Freetown, in January 1999.⁸⁹ Earlier reports spoke of helicopter flights from Liberia around the northern town of Makeni, then under rebel control. The helicopters reportedly ferried tons of light arms and ammunition to the rebels.⁹⁰ A Ukrainian 'businessman' based in Liberia, Leonid Minin, was reported to trade in timber, arms and diamonds.⁹¹ He reportedly used a far less expensive method of getting arms to the RUF. Minin, who also owned a trucking firm, had arms driven from Liberia into Kailahun, the RUF's main base, using the derelict railway line as a track and the thick forest as cover.⁹² Of greater concern are more recent reports that parts of Sierra Leone, such as the extremely fertile Kailahun District bordering Liberia - under RUF control - had become sites for opium poppies and coca plants, and that the crops are going over the border to Liberia for processing and export.⁹³

In January 1999, the West African ECOMOG force apprehended an Israeli named Yair Klein attempting to sell helicopter spare parts to the Freetown authorities just after the devastating attack by the RUF on the capital. Klein is a former Israeli military officer. He was (at the time of writing this report) facing trial in a Freetown court, accused of spying for the rebels, and supplying them with arms through Liberian networks directly linked to the Liberian President. Klein had been involved in the training of Taylor's elite fighters and before that, through his company, Spearhead Inc., he worked in Colombia. He is still wanted by Colombian authorities for providing 'instruction and training in terrorist activities' to paramilitary and vigilante groups in Colombia's Magdalena valley region between 1987 and 1989, according to the warrant issued by Colombian judicial authorities for his arrest in February 1994. The trainees later joined the Medellin drug cartel.⁹⁴ Freetown authorities say that Klein provided them with information about the RUF's drug and arms trade, implicating the Liberian president. Curiously, the same informant claimed that Israel has been quietly putting pressure on the authorities to have Klein, a former senior member of the Israeli reserve force, released.⁹⁵

Taylor's support for the RUF rebel war has been extensively discussed by the media, scholars and politicians.⁹⁶ Less well discussed is the possibility that Taylor may now be supporting a 'rebel peace' for the same reasons that he supported the war. Taylor may have noticed that with the escalation of the conflict, much of his potential income was being spent to keep the fractious RUF together, to pay Liberia-based South African trainers, and to buy more arms and ammunition. This may be why he pressured the RUF to sign the July 1999 peace accord in Lomé.⁹⁷ There, the RUF successfully insisted - on pain of restarting its terror campaign - that its leader, Foday Sankoh, be placed in charge of the exploitation and sale of Sierra Leone's diamonds in exchange for 'peace'. The appointment of Sankoh as chairman of a quickly-forged 'Commission for the Management of Strategic Resources, National Reconstruction and Development' (CMRRD), to control the exploitation and management of diamonds merely recognized what was already a matter of fact: the RUF was controlling all the major diamond mining areas, including Kono district and Tongo Field.

That the RUF would be so fixated on the country's diamonds is hardly surprising, even discounting the extraordinary accessibility of the gems: the group itself is dominated by many former illicit diamond miners. The RUF's main battle commander, 'General' Sam Bockarie (a.k.a. Maskita), was reportedly a *san san* boy (illicit diamond miner) in Kono before becoming a professional disco dancer and hair-dresser in Liberia, and later in the Ivory Coast. He was recruited in Abidjan, the Ivorian capital, first by Taylor's National Patriotic Front of Liberia (NPFL) and then by the RUF. He now reportedly owns substantial property in Monrovia, including a house and a night club, and is said to have direct access to Taylor's Executive Mansion whenever he visits.⁹⁸

In conclusion, there is little doubt that Liberia has become a major centre for massive diamond-related criminal activity, with connections to smuggling and theft throughout Africa and considerably further afield. In return for weapons, it has provided the RUF with an outlet for diamonds, and has done the same for other diamond producing countries, fuelling war and providing a safe haven for organized crime.

5. THE 'JUNIORS'

Despite the business success and the overwhelming influence of the De Beers and Antwerp cartels, there remains an element of anarchy in the industry. The anarchic element is provided by the 'juniors', small prospecting and mining companies which work on the edge of the industry, discovering diamond fields, generating funds on international stock markets, sometimes mining diamonds but more often than not eventually selling out to larger companies if they are successful.

Joseph Momoh's search for new investors in the early 1990s was carried forward by the new NPRC military government. With De Beers out of the picture and unwilling to return, and with the Israeli experience behind them, the government now began to receive overtures from junior mining firms. This report deals primarily with three 'juniors' with the greatest interest in Sierra Leone during the 1990s, interests that have at times extended far beyond the mining of diamonds.

5.1 The Canadian Connection

It is not a coincidence that so many of the world's mining companies are incorporated in Canada and listed on Canadian stock exchanges. A combination of Canadian tax provisions, the method of operation of the Canadian exchanges and Canada's own resource history have encouraged many junior exploration and mining companies to operate from Canada. For a very long time Canada has been the premier country of the world for the venture capital it supplies to small mining companies.

Part of this is explained by Canadian history. Canada has largely developed from extractive industries and has an abundance and variety of mineral resources. Consequently, Canada has high levels of expertise in mining, a large number of exceptional mining geologists and perhaps more important, an abundance of skilled penny stock promoters - 'the bottom feeders of the mining business.'⁹⁵ The country also has a population of investors with a penchant for penny stocks. It is in this environment that Canadian stock exchanges - particularly the Vancouver and Calgary exchanges (recently merged as the Canadian Venture Exchange) - became 'mining exchanges' or 'wildcat exchanges'. Mining is a risky, tough business, and the probability of striking it rich is slim. Only one in 10,000 exploration companies will find and bring a mine into production. Because of the high risk of failure and the low level of capitalization by most mining companies, Canadian stock exchanges have traditionally been easier to access, with lax disclosure requirements and lower capitalization requirements than exchanges in many other countries.

This explains why so many non Canadian firms, including some that have been involved in Sierra Leone, are traded on Canadian stock exchanges and have their nominal headquarters in Canada. A more detailed discussion of this phenomenon is contained in Annex 1.

5.2 Rex Diamond Mining Corporation

Rex was established under the Business Corporations Act of Ontario (Canada) on September 14, 1995 through the amalgamation of Kimberlex Resources Ltd. and Speer Darrow Management Inc. Rex is formally a Canadian company registered on the Toronto Stock Exchange and its registered headquarters is in Toronto, Canada. The Toronto office is a facade, as the Project Team discovered after months of phone calls and then a visit to the premises. There it was discovered that the 'office'

was little more than an answering machine and that the real headquarters are in Antwerp where its President and CEO resides, and where management decisions are made.⁹⁶

Other than raising Canadian funds on the Toronto Stock Exchange (TSE), the strongest connection Rex has to Canada is the presence of three Canadians on the Rex Board of Directors, including the Hon. Robert P. Kaplan P.C., Q.C., former Solicitor General of Canada.⁹⁷

Rex is headed by Serge Muller, the President, CEO and largest single stockholder. Muller has been engaged in the diamond business since joining his family company, S. Muller and Sons Diamonds NV, 20 years ago. Muller is a member of the Diamond Bourse in Antwerp and represented family company sightholders of De Beers from 1982-1994, during which time he was responsible for rough diamond purchases. He has also been involved in the diamond business in South Africa for more than 15 years, initially as a purchaser of rough diamonds and operating cutting plants, and then in connection with the acquisition and development of the Bellsbank and Rex mines, now properties of Rex in South Africa. Muller has had a long history and involvement with Sierra Leone, originally providing financing to the National Diamond Mining Company (NDMC) secured by their diamond production. In 1989 the Government of Sierra Leone entrusted the NDMC itself to Muller and Sons, but official diamond exports plummeted from 141,800 carats in 1987/88 to 4,800 carats in 1988/89. In May 1992, the new military government announced that all output from the NDMC would be sold at public tender.⁹⁸

Rex has extensive holdings and participates in virtually all aspects of diamonds, from exploration through to selling its own uniquely branded diamonds on the Internet. It is a vertically-integrated company with extensive diamond exploration in Mauritania, diamond concessions in Sierra Leone, two diamond producing mines in South Africa and diamond cutting, polishing and marketing enterprises in Antwerp. The company also owns a diamond sorting and marketing operation in Antwerp. All Rex activities are operated as subsidiaries of their Corporate Head Office in Toronto. Rex subsidiaries include the following:

Table 7. Subsidiaries of Rex Diamond Mining Corporation

Name	Jurisdiction of Incorporation	Ownership %
Rex Mining Company NV	Belgium	100%
Rex Diamond Company NV	Belgium	100%
Rex Diamonds (Barbados), Inc	Barbados	100%
Bellsbank Consolidated Diamond Mine (Pty.) Ltd.	South Africa	100%
Rex Mining Corporation Ltd.	South Africa	100%
Loxton Exploration (Pty.) Ltd.	South Africa	100%
Rex Diamond Corporation (Pty.) Ltd.	South Africa	100%
Rex Exploration (Pty.) Ltd.	South Africa	50%

Source: *Annual Information Form for the Year ended March 31, 1999* (SEDAR: System for Electronic Document Analysis and Retrieval, www.sedar.com/homepage.htm) August 18, 1999.⁹⁹

Of the Rex holdings, the most important for the purpose of this analysis is Rex Mining NV. Rex Mining NV is incorporated under the laws of Belgium and is centred in Belgium. Rex Mining NV was

incorporated on November 29, 1990 under the name of Coast to Coast Trading NV, and changed its name to Rex Mining Company NV effective November 3, 1993. Rex Mining NV is licensed to trade in diamonds in Belgium, and holds the mining leases in Sierra Leone. Rex Mining NV also operates a diamond sorting, cutting and marketing operation in Antwerp. The concessions held in Sierra Leone are commonly referred to as the Tongo Field and Zimmi (see Annex 2 for more details).

The Tongo Field property consists of approximately 65 square kilometres and is located in Kenema District. The present lease expires on February 28, 2019. The Rex property has been previously mined for alluvial diamonds, but Rex reports that it has discovered four kimberlite dike zones on the property. The Zimmi Property consists of approximately 54 square kilometres and is located in Pujehun District. The lease on this property expires on February 28, 2019. The Zimmi property is also an alluvial property, which was developed for mining during the mid-1980s. The property was abandoned before commencement of full-scale mining because of civil unrest. Rex company geological reports, based upon sampling programmes carried out on the property, indicate that the property contains deposits of large stones of high quality. Rex believes that the Zimmi property has the potential to produce alluvial diamonds at surface and that high-grade paleo channels, and other geophysical features indicate the possibility of kimberlite dikes.

Rex says that it maintains close contact with high level personnel within both the Government of Sierra Leone and the RUF. Still, there remains some dispute at the end of 1999 over whether Rex still holds or will hold in the future their Zimmi and Tongo Fields concessions. Rex argues that their leases have been paid and they are in possession of a letter from the Director of Mines of the Government of Sierra Leone ensuring their leases still hold. Serge Muller had the following to say on this issue:

For the third time in a year reassurances were given by both Government and RUF officials as to the strong and lasting friendship of Rex in Sierra Leone. Further to the Lomé Agreement (13 July 1999) the Parliament of Sierra Leone passed a Law on 23 July 1999 to clarify the mandate of the Commission for the Management of Strategic Resources. Clause 10 (4) clarifies the issue of the review of the mining concessions as follows: The Commission shall declare void any concession or mining lease in gold and diamond in existence immediately before 21 July 1999 if such concession or mining lease is found to have been obtained by fraud or tainted with illegality or as being contrary to public policy or the general public interest. We have again received confirmation from all parties, Government and RUF that the Rex leases are in good standing.¹⁰⁰

In his Chairman's Letter in the Rex *1998 Annual Report*, Muller reiterates that 'the Ministry of Mineral Resources formally reconfirmed both titles to Rex's major assets in Sierra Leone, the Tongo Fields and Zimmi on August 18th of this year (1999).'¹⁰¹ This letter, however, predates Lomé.

Ben Holemans, Rex's Chief Financial Officer and Secretary and member of Rex Board of Directors, also attempts to boost stockholder confidence, saying that, 'Serge has been active in Sierra Leone for more than 10 years and has close friends in all political factions of both Government and the RUF. Throughout the difficult times Serge has maintained open channels with the government and with the RUF while not interfering in the local politics.'¹⁰²

Despite Muller's claim and Holemans' confidence, the RUF begs to differ. Foday Sankoh, it seems, watches the Internet, and personally requested the Sierra Leone National, Independent, Neutral Journalist Association (NINJA) to carry his rebuttal:

No one from the RUF has ever spoken to any Rex Diamond official to reassure them of any such information as they issued yesterday. It is important that every single mining lease ever granted in Sierra Leone be thoroughly examined by professionals. The RUF is not yet in a position to know if the Rex Leases are tainted with illegality until the RUF gets a professional analysis of these Leases. No member of the RUF has ever been given a copy of any such lease so we may certainly not have reassured Rex Diamond Mining Company.¹⁰³

There is perhaps some reason for Sankoh's ambivalence about Rex. In 1998, Sierra Leone lost its only combat helicopter - a serious problem as the Soviet-built gunship had been the government's most effective weapon against the RUF. Zeev Morgenstern, Rex's Managing Director, and Muller came to the government's aid by making an arrangement to supply the government with engines, parts and ammunition worth a value of US \$3.8 million. The deal went sour as a result of defective parts supplied from Russia. Reporting in October 1999 on the activities of the two Rex executives, the *Washington Post* stated that during interviews Morgenstern and Muller both said, '...the arms deals were unrelated to Rex's mining activities'.¹⁰⁴

5.3 AmCan Minerals Limited

AmCan Minerals Limited is incorporated in Canada, listed on the Canadian Venture Exchange, and maintains its headquarters in Toronto. AmCan was founded in 1989, and its present principals acquired the company in 1993. Since 1993 AmCan has acquired diamond and gold concessions in Sierra Leone and Angola. In an undated AmCan document entitled, 'The AmCan Diamond and Gold Project - Sierra Leone', the company optimistically predicted that it would annually mine and sell 114,000 carats of diamonds at a value of US \$200 per carat, for an annual revenue of US\$ 22.8 million. After all costs were deducted, AmCan predicted an annual post-tax profit of Cdn.\$7.48 million, a level that would continue into the future.

Based on their positive evaluation of the Sierra Leone diamond potential, the company placed four million new shares on the market at 25 cents apiece in order to raise \$1 million for its Sierra Leone operations. While AmCan's pronouncements had the desired affect - raising badly needed funds from the public - it did not result in the mining of diamonds. AmCan commenced preliminary operations on their high terrace diamond deposits and anticipated that full production levels would commence in the fall of 1996. However, with the conflict in Sierra Leone, all production activity ceased, and in mid-1997 AmCan withdrew its staff and moved to protect its equipment and its property.

Between 1995 and 1999, AmCan generated total income of Cdn.\$446,999 and had losses every year during the period, finally ending up with a 1999 accumulated deficit of more than Cdn.\$7 million. Over five years its total proceeds from diamond sales were approximately Cdn.\$171,000. The annual losses per share of between one and five cents is significant when one considers that AmCan stock was selling for only six cents a share in October 1999. The Sierra Leone and Canadian

governments cannot be optimistic about collecting taxes from AmCan. The company presently has a loss carry-forward of over Cdn.\$3.4 million to write off against future company income.¹⁰⁵

For several years, AmCan attempted to operate exclusively in Sierra Leone, however during 1999 it obtained five diamond concessions in Angola. In Sierra Leone, AmCan has an explorations license for diamonds in Kono District's alluvial fields as well as one kimberlite pipe with its surrounding dikes. Two of the blocks held by AmCan are immediately northeast and contiguous with the Koidu kimberlite project that is controlled by Vancouver-headquartered DiamondWorks (see below). Through its subsidiaries, AmCan also holds concessions on 12 river lots on the Sewa River and three 144-acre lots on the Old River Terraces immediately southwest of the Koidu Kimberlite Project. AmCan presently holds an exploration license in Kono District, rights to areas surrounding a kimberlite pipe covering a distance of 27 miles, the widest point of which is eight metres. AmCan also holds a 90% interest in a 50 square kilometre gold property on the Pampana River in Tonkalili District. (See Annex 2 for more details on AmCan concession rights)

AmCan gained the Sierra Leone properties by acquiring already existing companies and by forming of one new company:

- In 1994 AmCan formed AmCan Minerals (SL), in which it holds 90% interest. AmCan (SL) Limited holds interests in 17 parcels of properties and 22 properties;
- In 1996 AmCan moved to acquire the privately held ArmSec International (SL), which brought with it diamond-bearing properties in Sierra Leone and Liberia, and a large quantity of specialized mining equipment. Along with the 100 per cent purchase of ArmSec International (SL), AmCan appointed its owner and CEO, Michau Huisamen to its Board of Directors and to the position of Managing Director of AmCan. AmCan states that 'Huisamen has an extensive background in the diamond mining and security industry in South and West Africa.'¹⁰⁶

With the purchase of ArmSec International (SL) and the appointment of the owner to its Board of Directors, AmCan adds to its knowledge of security issues. One of AmCan's long-serving Board members is Edwin D. Sanford, who also holds the position of Vice President for Africa Operations. Sanford is a retired Lieutenant Colonel of the Canadian Armed Forces and is responsible for the operation of the Sierra Leone diamond properties. AmCan states that Sanford, throughout his 35 year international military career was '... specialized in security at every level including the most top secret areas as an advisor to both the Canadian Armed Forces and the Government of Canada.'¹⁰⁷

Until its purchase by AmCan, ArmSec International (SL) was a subsidiary of the South Africa-based ArmSec International, which Michau Huisamen owned. AmCan Toronto informed the Project Team that ArmSec International (SL) is purely a mining company and has nothing to do with arms or security. Asked if Huisamen, their newly appointed Board Member, still owned or had interests in the parent company of ArmSec International, AmCan Toronto said that it did not know. AmCan also said that it did not know what kind of business ArmSec International was involved in.¹⁰⁸

AmCan has strong connections on the ground in Sierra Leone. David Quee is AmCan's lawyer and personal representative in Freetown. Quee also is Chairman of the Sierra Leone Government Gold and Diamond Office (GGDO). The GGDO is the government office responsible

for monitoring the diamond industry, valuing Sierra Leone diamonds and levying the government tax on diamonds. Quee is also a senior member of the political party in power (SLPP) and was President Kabbah's First Interior Minister. When interviewed by the project team in Freetown, Quee said he did not believe that his appointments with both AmCan and the GGDO constituted a conflict of interest.¹⁰⁹ Like all the diamond companies attempting to operate in Sierra Leone, AmCan believes that its existing concessions remain valid and are fully paid for.

5.4 DiamondWorks and Branch Energy

'All rising to a great place is by a winding stair' - Sir Francis Bacon

The quotation from Francis Bacon - which opens DiamondWorks' 1998 Annual Report - aptly describes the short history of the company. It has indeed been a 'winding stair' but it is yet to be determined whether the 'great place' will be discovered. On the way up the winding stair the company has been touched by international intrigue, and much of its activity has been shrouded in mystery. It has had its Angolan mines closed and staff killed by bandits, and it has been shut out of Sierra Leone because of military conflict. Correctly or incorrectly, DiamondWorks and its subsidiary, Branch Energy Ltd., have been linked with at least two international mercenary/security groups, two attempted coups, and many of the most important international mercenary and mining personalities of recent years.

DiamondWorks is incorporated in Canada and listed on the Toronto Stock Exchange with 'headquarters' in Vancouver. But like many other 'Canadian' junior mining firms whose real centre is elsewhere, DiamondWorks' management is centred in London, and its operational headquarters are in Johannesburg.¹¹⁰

Early Days – The Inception of DiamondWorks

The DiamondWorks story begins with the Carson Gold Corporation. In the early 1990s Carson became one of the most active worldwide junior explorers. One of Carson's first ventures was to place a Yukon placer property into production. Little gold was actually mined, and Carson subsequently re-emerged as 50 per cent owner of a commercial fruit and ornamental nursery enterprise. Carson's most important supporter at the time was Robert Friedland, a flamboyant penny stock gold mine promoter.

In early 1993 the company arranged a large private placement of shares, the bulk of which were purchased by Vengold Inc., a company owned by Friedland. Vengold thus became a major shareholder of Carson, and Robert Friedland's brother, Eric, assumed the position of Chairman and CEO. The arrival of the Friedlands brought Carson into the spotlight and the value of the company's shares quadrupled. The Friedlands started expanding. They purchased gold properties in Venezuela, gold and copper properties in the Philippines and then made a bid for properties in China. In the spring of 1995, Carson surprised the market with two major deals. In the first, Carson announced its intention to acquire China Diamond Corporation, offering 25 million shares of Carson stock for the company. That was followed by a move to acquire Branch Energy Ltd., a private company registered on the Isle of Man. Friedland offered 33 million Carson shares for the Branch Energy purchase.

The China deal ultimately fell through, but the acquisition of Branch Energy Ltd. proceeded and Carson was now in the diamond business, as Branch Energy Ltd. held significant interests in a number of diamond properties in Angola and Sierra Leone. Important organizational changes took place throughout 1996 and in October of that year, Carson Gold became DiamondWorks, complete with its new fully-owned subsidiary, Branch Energy Ltd. Eric Friedland became the first President and CEO. By this time, the Company had written off most of its Venezuela and Philippine projects and sold its interest in China. From this period on, DiamondWorks was exclusively a diamond explorer.¹¹¹

Branch Energy Ltd. is registered and incorporated in the Isle of Man, where public disclosure rules make basic information difficult to obtain. DiamondWorks documents and publications contain little information on its subsidiary. The only public and accessible information on Branch Energy Ltd. is that it holds interests in a number of African diamond concessions, principally in Angola and Sierra Leone, that it was first established in 1994, and that its present Director is Bruce Walsham, who is also President and CEO of DiamondWorks. Branch Energy's contact numbers, office address and mailing address are in Johannesburg, South Africa. Branch Energy Ltd. itself owns two subsidiaries. One is Branch Minerals and the other Branch Energy (Uganda). Michael Grunberg, a Director of DiamondWorks is listed as the contact person for Branch Minerals and Branch Energy (Uganda). Company documentation stresses that these two companies are not subsidiaries of Branch Energy's parent company, DiamondWorks.¹¹²

Complications in Sierra Leone

DiamondWorks and Branch Energy have become the subject of much speculation and interest because of their apparent but much-denied connections with two major international security firms, Executive Outcomes and Sandline. In 1995, The Government of Sierra Leone, backed onto the Freetown peninsula by the RUF and facing certain defeat, engaged the services of Executive Outcomes (EO) to help in its defence. With 200 imported soldiers, air support, and sophisticated communications equipment, EO pushed the RUF back from Freetown within a week, and within another month had cleared the major diamond areas of Kono as well.

DiamondWorks has been criticized for its non-mining activities in Sierra Leone. The company has responded by posting a section on its web site entitled, 'Setting The Record Straight'. The company periodically issues a 'Statement & Media Advisory', meant to correct comments by researchers and the media. The efforts do not usually help, focusing more on 'what is not the case' than what is. A few examples:¹¹³

- At no time has Branch Energy Ltd. bought, or otherwise obtained, mining concessions in Sierra Leone, Angola, or elsewhere from Executive Outcome or any of its related companies;
- There is no relationship, corporate or otherwise, between DiamondWorks and Executive Outcomes or Sandline International. Furthermore, there is no relationship, corporate or otherwise, between Branch Energy Ltd. and Executive Outcomes or Sandline International. Executive Outcomes does not have an interest in Branch Energy Ltd.'s diamond concessions in Sierra Leone, or elsewhere;

- Neither DiamondWorks nor Branch Energy Ltd. has ever contracted with Executive Outcomes;
- Tony Buckingham introduced the services of Executive Outcomes to the Governments of Angola and Sierra Leone, but neither he nor any companies he is associated with, including Branch Energy Ltd., paid for, or otherwise sponsored, the provision of these activities.

Which events are cause, and which are effect is unclear, as are various corporate links and connections. Regardless of the DiamondWorks denials, a few events and relationships are, however, verifiable:¹¹⁴

- There is a strong connection between Tony Buckingham and Eeben Barlow, who at the time operated Executive Outcomes. As Barlow expressed it, 'We are very good friends. I've known Buckingham since 1993, and we share similar interests, we share similar views on many, many things, and we get along very well. So we're very good friends.' After the Executive Outcomes operation in Sierra Leone,

Box 5. Crooks

During the 1990s, Roger Crooks was known as a 'kingmaker' with a large amount of economic and political influence. An American millionaire and long-time Sierra Leone resident, he was also manager of the Mammy Yoko Hotel, and part-owner along with Texan Oscar Wyatt, founder of Coastal Corporation. Wyatt had built Coastal into a \$12 billion energy company, with interests in natural gas, coal, oil refineries, making international business arrangements with heads of government including Muammar Qaddafi and Saddam Hussein. When the Mammy Yoko came under deadly RUF attack in 1998, Crooks phoned Wyatt, strings were pulled, and the 22nd Marine Expeditionary Unit was dispatched from the USS *Kearsarge* to rescue trapped civilians.

There was more to Roger Crooks, however, than the hotel business. Quoting confidential police documents, the London *Sunday Times* revealed that Crooks had been involved in an attempt to sell 2,000 kgs of C4 explosives, Browning machine guns, mines and rocket launchers to contacts in Northern Ireland via Sierra Leone. Crooks also, according to the Times, owned extensive diamond and mining interests in Sierra Leone. It was Crooks who apparently leased the military helicopter used by Sandline to help Nigerian troops during the fight for Freetown.

According to Scotland Yard, 'Roger said that we would not have problem getting the arms from Sierra Leone as he had all the right contacts, in fact he even had a diplomatic passport for that country (Sierra Leone)'. Crooks was issued a Sierra Leone diplomatic passport in 1991 on the authorization of then President Joseph Momoh. The reason was to 'enable the holder (Mr. Crooks) to travel to the Islamic Republic of Iran on behalf of the Government of Sierra Leone'. The diplomatic passport was revoked in 1998, two days after the *Sunday Times* article appeared.

References: David Leppard and Marie Colvin, 'Diplomat Linked to Gunrunner', *The Sunday Times*, May 24, 1998; Christopher Palmeri, 'Deconstructing Oscar', *Forbes Magazine*, Oct. 19, 1998; Will Scully, *Once a Pilgrim*, Headline, London, 1998; Press Release, Office of the President of Sierra Leone, 26 May, 1998

Barlow became a shareholder in DiamondWorks;*

- One month after Executive Outcomes took control of the diamond area of Sierra Branch Energy secured a 25 year lease on diamond concessions in Sierra Leone. At the time, Tony Buckingham was a principal of Branch Energy Ltd.;
- Michael Grunberg, then a Director of Branch Energy, Ltd. and now a Director of DiamondWorks, travelled to Canada to seek international financing to develop the Sierra Leone diamond mines. 'We started discussions with the Friedlands, and we developed a relationship, which resulted in the integration of our diamond assets in Angola and Sierra Leone into one of their companies';
- Grunberg and Buckingham joined Branch Energy Ltd. and Carson Gold together, renaming the latter 'DiamondWorks'. Both Grunberg and Buckingham were then appointed as members of DiamondWorks' Board, with Buckingham the single largest stockholder, controlling approximately one-third of the total shares;
- Lifeguard, a security company established by Executive Outcomes and staffed by Executive Outcomes soldiers, continued to provide security for DiamondWorks properties after EO pulled out of Sierra Leone;
- Executive Outcomes owned Ibis Air and used it to transport its mercenaries. Tony Buckingham at one point agreed to be CEO of Ibis Air, but later turned down the job. Ibis Air operated out of the same office as the Buckingham companies. One of Buckingham's partners, Simon Mann, served for a time as Chairman of Ibis Air and owned 50,000 shares in DiamondWorks;
- Tony Buckingham introduced Executive Outcomes to the Government of Sierra Leone, helped in negotiating the EO contract and acted as intermediary between the President of Sierra Leone and Executive Outcomes;
- Reginald Glover, a senior Sierra Leone Cabinet Minister, states that he was ordered to turn over diamond concessions to Buckingham and his company, 'I, as Minister of Mines, was never consulted. In fact, I was directed that these mercenaries – Executive Outcomes – are coming in to help the government fight the war against the rebels and, as such, the mines more or less to be mortgaged for peace.'

* Buckingham and EO had collaborated on an earlier operation in Angola, and there would be future controversial connections between them and Sandline in Papua New Guinea in 1998. Although DiamondWorks has denied that Barlow was ever a shareholder, Barlow told the CBC program *Fifth Estate*, aired Feb. 4, 1997, that he was.

- In November 1997 Peter Penfold, Britain's High Commissioner to Sierra Leone met in Guinea with Rupert Bowen who was the DiamondWorks country manager in Sierra Leone. Their discussion about the security of Sierra Leone took place during the AFRC interregnum, during which the democratically elected government of Tejan Kabbah was also in exile in Conakry. Bowen allegedly discussed a plan for the British security firm, Sandline International to ship arms to Sierra Leone. Bowen, an ex-British Army officer, was then seconded from DiamondWorks to Sandline for their Sierra Leone operation, with the blessing of the CEO of DiamondWorks. Walsham stated: 'I was very happy for Rupert in his capacity of having all the contacts, all the background in West Africa to undertake that at Sandline's request'.

- Buckingham never denied his involvement in the Sandline arms deal, but the CEO of DiamondWorks stated that Buckingham was doing it as a 'private citizen' and not as a Director of the company;

Box 6. Rakesh Saxena – Financial Wizardry, Diamonds and Guns

At the time of writing, Rakesh Saxena remained under house arrest in Vancouver, three years after being arrested by the RCMP. He awaited a Canadian decision on extradition to Thailand where he was accused of defrauding the Bangkok Bank of Commerce of C\$88 million. When he was arrested, he had a suitcase stuffed with Swiss francs. At one point he was bailed out of jail, but he was re-arrested when the court found he had violated bail by attempting to obtain a false Yugoslav passport. Apart from the Thailand fraud he was involved in 18 other civil suits in Canada at the time this report was written. On July 9, 1999 two companies on the Vancouver Stock Exchange, Global Explorations Corporation and Quadrant Financial Corporation, were delisted. The reason: their connection to Rakesh Saxena, who had a controlling interest in both companies. Saxena purchased the shares while he was under-house arrest in June 1999.

Saxena got Global Explorations into the diamond business by bringing them extensive diamond concessions which he acquired through a deal with the President of Sierra Leone when the country was under siege by rebels. Saxena was representing Blackstone Capital Corporation, registered in Belize. As part of the deal, Saxena was allegedly granted by the Government of Sierra Leone, 'the right for the Grantee's (Saxena's) internal security force to bear and use arms and an agreement regarding rules of engagement for such internal security force to be made with the Solicitor-General and Inspector General of Police.' In return for these favours Saxena was to provide the Government of Sierra Leone US\$10 million.

Sources: Financial Post, July 23, 1999, Toronto Globe and Mail July 17, 1999, Ottawa Citizen, Oct. 23, 1999; undated Memorandum of Understanding between the Government of Sierra Leone and Blackstone Capital Corporation.

- Rakesh Saxena (see Box 6) appears to have been the middleman in the Sandline arms deal, handling the funds for Sandline. However, when Saxena was jailed in Canada, the flow of funds stopped. Grunberg flew to Canada and met with Saxena in jail. With no apparent hope

of finding the rest of the funds, Grunberg contacted retired Canadian Brigadier General Ian Douglas in Ontario for help. Grunberg made it clear to Douglas that he was in Canada to try and get funds for a counter-coup attempt in Sierra Leone. Douglas has been quoted as saying, 'I was flabbergasted at the time. I said, you're here to do what?' Douglas told Grunberg there was nothing he could do to get Saxena out of jail, and informed officials at the Canadian Department of Foreign Affairs about the meeting;

- Grunberg had the following to say regarding the Sandline arms deal. 'It is important that I again clarify on behalf of Sandline that the consignment of small arms, which had been ordered by President Kabbah against an End User Certificate personally signed by him, was delivered to Sierra Leone with the co-operation of ECOMOG. In fact, the Nigerian commanders of ECOMOG helped Sandline organize the necessary flight plan clearances and en-route refueling stops for the shipment. On arrival the consignment was delivered as planned to ECOMOG for safekeeping and subsequent issue. Furthermore, two official UK government inquiries (the Legg Report and the Foreign Affairs Committee Report) have confirmed that Sandline had a degree of approval from the British High Commissioner and was entitled to believe that it had the approval of Her Majesty's Government to deliver the consignment. In addition, the UN's own legal adviser issued an opinion stating that the delivery was not a breach of sanctions.'
- Bruce Walsham, CEO of DiamondWorks, shares the same office with Sandline, and two of his Board members were involved in the Sandline deal, but he insists that at no time did he know about the activity (see Box 7).

By mid-1998 DiamondWorks was in serious financial difficulty. Their difficulties intensified and reached a peak at the end of 1999. In anticipation of mining in Sierra Leone, DiamondWorks had raised Cdn. \$17 million on Canadian markets. This was spent on an acquisition programme, the development of plant and earth moving fleet, and a bulk-sampling programme. Many of these expenditures were destined for its Koidu property in Sierra Leone. In May 1997, the company had just commenced bulk sampling at its Koidu property when the AFRC coup occurred. DiamondWorks was forced to shut down and evacuate the country a short time later, with heavy losses. The company estimated that in 1997, during the period of suspended operations, maintenance and security costs amounted to US \$3.2 million, and in 1998 the costs were \$2.5 million.¹¹⁵

During 1997 and early 1998 DiamondWorks had also commenced diamond production at their Angolan properties. In November 1998, however, the company was forced to suspend activities at its Yetwene and Luo properties because of an armed attack on the Yetwene camp. During the attack eight mining staff were killed, including the mine manager, and eight staff were abducted.

The company's 1998 Annual Report stated the financial situation:

As at November 30, 1998 DiamondWorks had cash and cash equivalents of approximately US\$0.9 million, a working capital deficiency of approximately US\$11.3 million and long term debt of US \$5.0 million.

The Company presently does not have sufficient financial resources to maintain current operations or to undertake all of its currently planned exploration and development programs and capital equipment purchases during the forthcoming year. In addition, the Company is dependent on obtaining new financing for the future development of its properties and for acquisition and development costs of new project opportunities. There is no assurance that such financing will be available when required by or under terms favorable to the Company.¹¹⁶

In addition, by the end of 1998 DiamondWorks had an accumulated deficit of US \$72 million, and by September 1998, the value of their shares on the Toronto Stock Exchange fell to 72¢ a share, down from a 52 week high of Cdn. \$2.15. A year later, shares were selling at 21¢ a share. Collapse, however, was averted. A restructuring of the company and new infusions of cash from South Africa, along with the departure of Tony Buckingham and other controversial figures from high-profile positions, appeared to give the company a new lease on life. By mid December 1999, however, with the stock trading at under 4¢ a share, there was a further restructuring, which included the departures of Bruce Walsham and Michael Grunberg. News reports suggested that DiamondWorks was close to the bottom of its winding stair.

Box 7. Interview with DiamondWorks' Bruce Walsham

Victor Malarek: I guess what I have a problem with, when I look back at all of the activities of Tony Buckingham, all the people he spoke to, when I look at Michael Grunberg flying to Vancouver, meeting with the main bag man, Saxena – you know these men, it's a small Board, and they don't tell you anything?

Bruce Walsham: Well, they never told DiamondWorks that in any detail at all. They said that there were moves afoot to re-establish Kabbah.

Victor Malarek: Boy, if somebody said to me, There are moves afoot to re-establish Kabbah, I'd say, What are they? What are they? Let me in.

Bruce Walsham: Well, sure, I mean, you would do that naturally. But the fact.....

Victor Malarek: Did you?

Bruce Walsham: No, I didn't

Victor Malarek: Was that a way of saying, do what you've got to do, guys, but don't tell me because we don't want to know.

Bruce Walsham: Well, to a degree. I mean, the fact is that our job was to keep production going, keep maintenance of our position. It's a commercial world.

Victor Malarek: So, it's all a coincidence. DiamondWorks and Sandline share an office, two of your Board members work with Sandline, and your Country Manager is seconded to Sandline.

Bruce Walsham: Yeah, I think it's a coincidence. It is a coincidence because we happen to have interests in Sierra Leone.

Victor Malarek: I've got to say it's a hell of a coincidence.

Source: Transcript of CBC *Fifth Estate* TV program, Nov. 3, 1998, pp. 12-13.

Like Rex and AmCan, DiamondWorks mined very few diamonds in Sierra Leone. In addition to its financial travails, its political future at the end of 1999 was also uncertain. It cannot be lost upon Foday Sankoh that DiamondWorks was intimately involved in more than one major effort to crush the RUF rebellion.

5.5 Conclusions: Mining the Stock Market, and Concessions for Protection

The nationalization of SLST/De Beers by the government of Siaka Stevens was followed by the parallel slide of both the country and the diamond industry into deep corruption and anarchy. Stung by organized crime, and having played most of the Lebanese and Israeli cards, the post-Momoh NPRC military government - despite its own predations - needed new international mining assistance and expertise. The only place left to turn was to the 'juniors'. A revised and more attractive investment framework sweetened the pot, and they came.

Despite the prominence of Rex, AmCan and DiamondWorks in Sierra Leone, none have yet mined many diamonds - war being the major constraint. All, however, have successfully and extensively mined the Canadian stock market, and more than one has become engaged in business transactions that extend well beyond both diamonds and the stock market.

The juniors arrived in Sierra Leone when the formal instruments of the state had all but disappeared, notably law, order, probity and justice. They also arrived in the midst of a brutal rebel war which had at its epicentre the same thing that brought them to the country - diamonds. Lawlessness, however, was not new. The government of Sierra Leone had - from the 1950s - given up pretending that it could police the diamond areas. From the days of the SLST Diamond Protection Force, it had encouraged and even required foreign investors to make their own security arrangements. This goes a long way to explaining why junior companies in Sierra Leone appear to have such an intimate relationship with private security firms.

There is a distinction to be made, however, between the need to hire a private security firm in order to police a diamond operation (or a shopping mall for that matter), and the provision of troops and weapons in support of a faction in a civil war. It can be said that regardless of their purpose, the involvement of Executive Outcomes in Sierra Leone was in a good cause. EO successfully protected a government (albeit a military government that had taken power in a coup) against a brutal and illegitimate rebel force. EO was certainly cheered in the streets of Freetown for its efforts. It can also be said that the provision, or the attempted provision of weapons to the democratically elected government of Tejan Kabbah - a UN arms embargo notwithstanding - made sense and was in support of a good cause.

The problem is not so much the individual episodes, but the bigger picture which they help to form - of a world in which beleaguered governments find little formal international protection against internal predators, and are forced into Faustian bargains in order to survive. Despite much ingenuous intellectual disapprobation, private security firms thrive. As Guy Arnold puts it,

The emergence into the public eye of mercenary organizations or companies - Executive Outcomes of South Africa or the British organization Sandline, for example - suggests both a new public acceptance of the role that mercenaries are expected to play and an increasingly

brash certainty on the part of the mercenary community that its services are needed and that its members will continue to be lucratively employed round the world.¹¹⁷

In the absence of a governmental capacity for self-protection, and in the absence of effective mechanisms for international protection, private security firms and mercenaries - despite the international uproar around EO and Sandline - may well have a profitable future. Closely connected to mining interests (as in Sierra Leone, Angola, Papua New Guinea, DRC and elsewhere), the phenomenon, however, is more than just a convenient way to let the international community 'off the hook'. It begins to look like a protection racket, with the payment for assistance made in future mineral concessions: 'concessions for protection', as Arnold puts it.

It is by no means clear yet whether junior mining companies have the capacity to undertake serious mining ventures in Sierra Leone. Only time and peace will tell. On the security issue, however, a peace agreement is only one step in a long process to provide real security in the diamond areas. An important next step will be the demobilization of fighters and a return to the rule of law under government authority. Before this can be achieved, however, there may be a lengthy interregnum required for UN peacekeeping forces.

While it may be legitimate to expect mining companies to provide *security* at their sites, it is not reasonable to expect them to do more. Nor should they offer to do so. In the long run, the overall security of the country, including the diamond areas, must be provided by the Government of Sierra Leone. International support in making this possible is an urgent priority.

6. LOCAL PLAYERS

Although the scene on the ground in Sierra Leone has changed in many ways over the past decade, some aspects have not. In many parts of the country there are minor players for whom the diamond business is a matter of subsistence and survival. They are found mainly in the diamond mining areas, and particularly in the more stable Bo and Kenema Districts. Mostly they are small-time indigenous Sierra Leonean dealers (a few licensed), age-old *Maraka* (travellers from Guinea, Senegal, Gambia, Mali and some from as far as Angola), traders (many registering as ECOWAS citizens) and small-time Lebanese dealers.

The 1994 Mines and Minerals Act restricted miners' and agents' licenses to Sierra Leonean nationals, and banned non-nationals from travelling to actual mining areas (they were restricted to towns like Bo and Kenema or the capital Freetown). However, many of these non indigenes, both Lebanese and ECOWAS citizens, have acquired Sierra Leonean passports, and can therefore own mining licenses and travel freely. An additional problem for locals is that the banks, continuing a discredited colonial practice, still decline loans to indigenous players, claiming that the Lebanese, with their already significant assets, are more credit-worthy. Also, both Lebanese and many ECOWAS citizens have extensive overseas contacts, as well as established smuggling routes. (The *Marakas* or *Djullahs*, as they are called, already had extensive trading routes through many West African states even before the diamond rush.) These are advantages that smaller Sierra Leonean players do not have.

Interviews conducted by the Project Team in Bo among these three groups brought out in bold relief some of the problems and differences, but there were areas where all agreed. The most important had to do with the many bribes and 'dashes' they are required to pay to Ministry of Mineral Resources officials in order to acquire licenses. In their perception, the GGDO is corrupt, and is in any case not playing a useful role. The GGDO's main offices, once housed at the Bank of Sierra Leone, were burnt down by rebels in January 1999, and at the time of writing, this important institution was being operated in a run-down area of Freetown from an office that doubled as a private law firm.

All of this provides little incentive for legal exporting. In any case, there is currently no legal exporter in Bo, and the Freetown-based Lebanese exporter who flies in occasionally deals mostly with other Lebanese. Sierra Leonean and *Maraka* traders - who distrust the Bo-based Lebanese intensely - have to either travel with their diamonds to Freetown, or smuggle them out of the country. Given local perceptions of corruption in official channels and the need to pay bribes, the smuggling option makes sense in several ways: the economic return is higher and faster; payment in Liberia is in US dollars; and there is no paper trail. Needless to say, the risk of being caught is very low.

The war may have contributed to these problems. The war has caused a massive influx from rural areas, and Bo has grown from a pre-war population of just over 35,000 to nearly 400,000. Former diamond mining villagers living in Bo now have a better awareness about 'money affairs', as one of them, Patrick Sannoh, puts it. This means that profit margins for legitimate dealers may now be considerably lower than before, and it may be that they too will start looking elsewhere to sell their diamonds, away from the eyes of the GGDO.

It is important to note that unlike the operations of SLST (and later the NDMC), diamond mining today is largely informal and unsystematic. There is no valuation of deposits, and although

successive government acts have emphasized the need for miners to refill pits dug in the course of mining, this is rarely done. This poses serious environmental problems, so much so that some local authorities - particularly those in Pujehun District (where prospectors claim there are extremely rich deposits of diamonds) - have been reluctant to allow serious mining activities to take place in their jurisdictions. All land (which in Sierra Leone cannot be sold, only leased) is controlled by chiefs and prominent families, and these have always had a stake in mining. Prospective miners must pay 'surface rent' to them before they are granted the leases and, in the period before the breakdown of law and order, they had to pay compensation to the landowners for crops they destroyed or for desecrating sacred places in the course of their mining.

At this level, mining is still based on a 'tributor/supporter' system rather than wage labour.¹¹⁸ The miners, known as tributors, are recruited by a license holder who provides them with food and equips them with the simple tools needed for alluvial mining (picks, shovels, hand-made sieves and in some cases small drainage machines). In return, miners sell their finds to the license holder at prices that are vastly lower than what pertains on the 'open market'. Most miners, in fact, are also farmers or artisans; they simply change functions according to the season. Although their work is very important - indeed it is central to the rural economy and to the dynamics of the smuggling regime - successive governments have tended to neglect or take them for granted. A recent attempt to 'secure and monitor the legitimate exploitation of Sierra Leone's gold and diamonds' - the Commission for Management of Strategic Resources, National Reconstruction and Development' which resulted from the July 1999 Lomé accord - says nothing about the miners or, for that matter, the local authorities. Both are crucial factors to the success of any legitimate exploitation effort - for the reasons stated above, and for another reason which is a peculiar product of the war: the Kamajors.

Many Kamajors - a civil defense militia based on traditional hunting societies - are also miners. In Project Team interviews in Bo with a number of them, it was revealed that many had joined the civil defense group (like the diamond mining industry, an almost exclusively male affair) as a kind of survivalist strategy in order to gain 'corporate' security, as they continue their mining activities. The greatest danger has been the depredations of RUF rebels, who made diamond mining areas their chief target. According to Deputy Defense Minister Hinga Norman, who is also the Grand Patron of the Kamajors, over 80 per cent of the young men in Bo district have been 'initiated' into the movement. Not surprisingly, the Kamajors have made 'regulating' the mining regime in their areas a priority security issue. Informants in Bo told the Project Team that the Kamajors have been issuing mining 'permits' of their own, regardless of government licenses, and that non-natives of the district are discriminated against in the process.¹¹⁹ The Kamajors (a largely Mende group) believe that the war is the work of northerners (Temnes and Limbas) who aim to destroy the resource-rich Mende-dominated southern and eastern parts of Sierra Leone. They point to the fact that both the leader of the RUF (Foday Sankoh, a Temne) and the AFRC (Johnny Paul Koroma, a Limba) are from the north. Some northerners claimed in interviews that they have been routinely harassed, and that there are areas where they virtually cannot mine. The Kamajors in turn deny this, and claim that where there have been cases of harassment, they were merely trying to control the movement of 'unknown persons' who may well be rebels. Most were emphatic that a Foday Sankoh-controlled Commission would not be allowed to administer the diamond mining areas in the south without a fight.

7. OTHER ISSUES

7.1 Diamond Identification

There has been a long-standing problem in identifying cut or rough diamonds by their geographic origin. If diamonds could be reliably identified by source, this could become an effective tool in curbing the excesses of the illicit trade. For example, there is absolutely no doubt - as documented elsewhere in this report - that Liberia has become an entrepot for millions of carats of diamonds smuggled from a variety of countries - Sierra Leone, Angola, Russia and elsewhere. A reliable diamond identification technology would demonstrate not only that the bulk of Liberia's exports are not of Liberian origin, it could identify the real source, information of great interest to law enforcement agencies.

The issue of source identification is not new. Van der Laan reports a 1952 incident: a Gambian in transit from Sierra Leone to Beirut was arrested at Banjul (then Bathurst) airport for the unlawful possession of 1,319 diamonds. The diamonds were confiscated in favour of the Sierra Leone Government, based on an analysis by J. Pollett, a geologist who informed the judge that, 'the stones were all characteristic of diamonds mined in Sierra Leone'.¹²⁰

Using the 'characteristics' technique, it is generally accepted that polished diamonds cannot be identified by source, so the identification issue applies only to rough stones. Once they are mixed, however, even this form of identification becomes difficult.

In January 1999 De Beers wrote to the United Nations Angola Sanctions Committee saying: 'It is difficult to be confident of the origin of a diamond once it has left the place where it has been extracted. When a rough diamond has been polished, then the difficulty of identification becomes an impossibility.' De Beers advice to the United Nations was that the international smuggling should be regulated by limiting the trade to recognized firms and by tightening border controls around Angola.¹²¹ De Beers has also produced a document on the 'sources of rough diamond production and their individual characteristics' which states that:

- experts from De Beers and elsewhere can be reasonably sure of the origin of diamonds from a primary source or a broad alluvial area if they see a parcel of original 'run-of-mine' goods or a decent sized parcel (say several hundred carats) of specific types of rough gem diamonds;
- in the case of alluvial diamonds, the situation is complicated by the fact that some diamondiferous rivers cross national borders. For example, diamonds that have their origins in Angola have been transported by ancient alluvial flood plains or river courses into what is now the Democratic Republic of Congo, so the same types of diamonds can be found on both sides of the border;
- there are cases where an expert could be reasonably sure of the geographical origins of quite small parcels of diamonds, even individual diamonds, for example with some kinds of Russian crystals, some of the characteristic Australian goods, or the 'frosted' gems from Angola/Congo; however, in general it will be much more difficult to tell the origin of rough

gem diamonds when they are not run-of-mine, when there are only individual stones or small parcels available, or when diamonds from different sources have been mixed together;

- it is generally accepted that a single rough diamond cannot be identified with certainty, as having come from a particular source, certainly not to the level of evidence required for a court of law. There are occasional exceptions, i.e. some large and famous polished and rough stones with a known history.
- when a rough diamond has been polished, identification becomes impossible. During the polishing process, diamonds lose the natural features by which they could be identified.¹²²

A recent technological breakthrough, however, may provide a partial solution to the diamond identification problem. The Royal Canadian Mounted Police (RCMP) are actively pursuing the development of diamond 'fingerprinting' at their Central Forensic Laboratory in Ottawa. The RCMP believes that its technology is ideally suited to rough diamonds, but that the potential also exists for the identification and fingerprinting of polished diamonds.

Diamonds are typically thought of as pure carbon. However, even the best quality diamonds will have trace amounts of over 50 different impurities. Research indicates that by using diamond fingerprinting technology to compare the relative amounts of these impurities, the origin of diamonds can be determined. Laser ablation inductively coupled plasma mass spectrometry (LAICPMS) is used to analyze the trace impurity elements. The laser vaporizes a very small amount of material from the surface of the stone, leaving little or no visible damage. The mass spectrometer is then used to identify the impurity elements. Relative quantities of each element are determined and then compared to standards held in a data base.¹²³

According to the RCMP, the technology is developed and workable. However, in order for the fingerprinting process to be practically applied, a reliable data base must be created. This means that diamond samples from different mines and different countries must be 'fingerprinted'. Once that is accomplished, any rough diamonds on the market could be tested and matched against specific mine and country characteristics existing in the data base.

The RCMP stresses that it has yet to clearly identify the limitations and capabilities of the system through actual use.¹²⁴ Certainly the development of fingerprinting technology is one thing; the acceptance and universal application of the methodology is another. The potential difficulties in applying the technology are reduced, however, by the fact that the bulk of the rough diamond trade is centralized in only two organizations and two locations, the HRD in Antwerp, and the De Beers' CSO in London.

7.2 Certificates of Origin

UN Security Council Resolution 1173 (1998) of June 12, 1998 states that 'all States shall take the necessary measures...to prohibit the direct or indirect import from Angola to their territory of all diamonds that are not controlled through the Certificate of Origin regime of the [Government of Angola]. More recently, US Congressman Tony Hall introduced a bill to provide for the disclosure of source of gem-quality diamonds and gem-quality diamond products imported into, and sold in the

United States. If the bill is passed, it will require such diamonds and diamond products 'to be accompanied by a certificate stating the English name... of the country in which the diamonds were mined.'¹²⁵ Violations would attract a fine of up to US\$5000, and attempts to defraud would be subject to more serious penalties.

The UN Security Council focuses on the supply side, while Congressman Hall focuses on the demand side, observing that Americans buy 65 per cent of the gem-quality diamonds sold worldwide, 'making us a force the market must reckon with. Insisting that our consumers are informed of the original source of diamonds sold to them will send a wake-up call to the diamond industry. It will encourage countries and businesses in Africa to use their influence to end the wars that wreak so much havoc on that continent before those wars give diamonds a bad name.'¹²⁶

These initiatives are highly commendable, and are supported by the authors of this report. They are not without problems, however. Legally mined and exported diamonds from one country are mixed with those of others almost immediately upon arrival at the CSO or in Antwerp. With the best will and the best regulatory system in the world, tagging and tracking each gem-quality diamond - of which there are dozens, if not hundreds of millions each year - would be a task of enormous proportions. Tracking *illegally* mined diamonds that are mixed in countries such as Liberia would be a more daunting task still. Liberia could well provide official certificates of domestic origin which, under current circumstances, would be absolutely worthless. This report has demonstrated that the manipulation of statistics on countries of origin is rampant throughout the industry, extending the problem far beyond problem countries like Liberia.

This report takes a more pointed short-term approach to the issue of origin, recommending that the large volumes of diamonds said to originate in countries that have small or non-existent industries should be banned outright on world markets. We make this recommendation with special reference to Liberia and Ivory Coast, but it could be extended to the non-diamondiferous countries bordering Angola that have also done well from diamond exports. Over the longer term, the concept could be elaborated further, limiting exports from any country to an approximation of its annual mining potential, a figure that could be derived from new geological surveys. Ultimately, in order to be useful, certificates of origin would have to be approved by an international verification body with full access to information about a country's mineral resources, its mining capacity and the probity of its diamond industry as a whole.

8. RECOMMENDATIONS

The places you can sell uncut diamonds are pretty limited. It should not be beyond our wit to devise an international regime in cooperation with the diamond trade that cuts off the flow of diamonds from those who use them to buy arms and fuel conflicts.

- Robin Cook, British Foreign Minister

In writing this report, The Project Team understood that any recommendations for solutions to Sierra Leone's terrible and complex problems had to be pragmatic enough for them to have at least a reasonable chance of success. In other words, they should be realistic. Some of what follows is optimistic, but where Sierra Leone diamonds are concerned, business as usual is *not* realistic.

No single recommendation on its own will solve the problems of Sierra Leone's diamond industry, and most of the recommendations that follow are part of a comprehensive set of changes that need to be addressed together. In fact taken together, the recommendations have major policy implications not only for governments and international organizations, but for civil society organizations in Sierra Leone and abroad, for private sector firms and for individual consumers.

In addition to national and international dimensions, there are important regional dimensions to the diamond trade and the conflict in Sierra Leone. There will be no lasting results to peacekeeping, peace-building and reconstruction unless all three dimensions are addressed.

The recommendations fall under seven broad headings. The first and second sets have to do with the environment in Sierra Leone. The third and fourth sets deal with De Beers and with the diamond environment in Belgium. The fifth set has to do with neighboring states, particularly Liberia. One recommendation deals with the concept of a consumer campaign - possibly a necessary precursor to change elsewhere.

The general thrust of the recommendations aims at improved human and economic security, a sustainable peace, and at changing the economics of the diamond trade. If smuggling can be made more difficult, and if legal mining, investing and trading can be made more attractive, the potential for change can be turned into reality.

1 Framework for the Recommendations

- 1.1 A Permanent Independent International Diamond Standards Commission should be created under United Nations auspices in order to establish and monitor codes of conduct on governmental and corporate responsibility in the global diamond industry. It should draw members from intergovernmental institutions such as the Commonwealth and the OAU, from the diamond industry, from international law enforcement agencies and from international civil society organizations
- 1.2 In addition to the diamond-specific recommendations in this report, the development of sustainable peace in Sierra Leone will require major investment by the government of Sierra Leone and by donors in long-term basic human development and the creation of democratic institutions. Diamond-specific initiatives must be integrated into wider programmes aimed at

building fundamental human security and democracy, involving parliamentarians, journalists, teachers and a broad cross-section of civil society.

2 Recommendations for Action in Sierra Leone

- 2.1 Establishment of the rule of law and human security throughout the country is of primary and urgent importance for a return to peace, and for appropriate exploitation of the country's mineral resources. In the short- and medium-term, donor agencies, friendly governments, the UN Peacekeeping Force and ECOMOG must facilitate the disarmament and demobilization of extra-governmental forces. Force must be used in a timely fashion to halt a resurgence of conflict.
- 2.2 Special long-term UN security forces must be deployed in all major diamond areas.
- 2.3 Attention should also be given by the UN Peacekeeping force to blocking or destabilizing major smuggling routes from Sierra Leone into neighbouring countries.
- 2.4 Donors should actively support current British government efforts to rebuild Sierra Leone's army and police force. A professional diamond unit should be created with the ability to anticipate and counteract criminal activities. This reform should place human rights law and international humanitarian law at the centre of its efforts to create a credible non-partisan army.
- 2.5 The Government of Sierra Leone must ensure full transparency, high standards and rigorous probity in the implementation of its diamond purchasing, valuation and oversight activities. Corruption and conflicts of interest must be dealt with quickly and decisively. There is an important role to be played in this effort by Sierra Leonean civil society. Assistance in reviewing current systems and developing an enforceable code of conduct should be sought from appropriate donor agencies.
- 2.6 Systems must be developed in Sierra Leone for the payment of fair prices to legitimate small miners. The banking system must be able to provide adequate and timely funding to finance such purchases. Schemes which actively promote participation in small-scale artisanal mining by Sierra Leoneans, and which actively discourage the participation of non-citizens should be given top priority.
- 2.7 Effective and honest monitoring and inspection systems must be established throughout the mining and trading system. External assistance should be sought in developing these. Competent UN inspectors should be posted at different points in the system.
- 2.8 In creating incentives for foreign investment in larger-scale mining operations, the Government of Sierra Leone should raise its standards for investors, insisting on a minimum per annum exploration budget and/or minimum levels of market capitalization and/or assets.

Full corporate transparency must also be provided. Assistance in developing such standards should be sought from international securities commissions.

- 2.9 While it is reasonable to expect mining firms to provide security within their immediate areas of operation, under no circumstances should they be provided with concessions in return for larger security or military operations, or in return for the supply of weapons.

3 De Beers

De Beers is part of the problem. In its efforts to control as much of the international diamond market as possible, it is no doubt purchasing diamonds from a wide variety of dubious sources, either wittingly or unwittingly. The breadth of its control, however, is also its major strength, and is part of the solution to the problem. If De Beers were to take a greater interest in countries like Sierra Leone, and if it were to stop purchasing large amounts of diamonds from countries with a negligible production base, much could be done to end the current high levels of theft and smuggling.

- 3.1 As a matter of urgency, more rigorous oversight on the issue of origin must be instituted by the CSO.
- 3.2 Strong efforts should be made by the Government of Sierra Leone, international bodies such as the United Nations and the World Bank, and concerned governments, to persuade De Beers to return to Sierra Leone. At a minimum, De Beers should be persuaded to open a purchasing office in Freetown and should be given every incentive to do so.
- 3.3 Strong efforts should be made by the same international community to persuade De Beers to halt the purchase of all diamonds originating in Liberia and Ivory Coast until clear international guidelines have been developed for proving that any diamonds sold in these countries are genuinely of local origin. De Beers and all other foreign firms should be encouraged to close their purchasing offices in these two countries.

4 Belgium

The structure of the Belgian diamond industry may have served useful purposes when the industry was smaller. Today, however, it looks irresponsible, secretive and seriously under-regulated. It has a demonstrated attraction for new forms of organized crime, and is complicit in fueling African wars. The following recommendations are made to the Diamond High Council and the Government of Belgium, but they are also made to the European Union, and to other governments and institutions in Europe and Belgium with the potential to influence the outcome of events.

- 4.1 The Government of Belgium must take full and direct responsibility for oversight of the Belgian diamond industry. This includes taking direct responsibility for customs, valuation and statistical procedures.

- 4.2 The conflict of interest posed by the government's current customs-related arrangements with the HRD should be terminated.
- 4.3 A high-level commission of enquiry should be instituted into the Belgian diamond industry as a whole, with particular reference to its lack of transparency and questionable paper work, and its possible infiltration by organized criminal elements. Such an enquiry, while of primary interest to Belgian authorities, has implications that extend far beyond Belgium. The Belgian Government should invite representatives of international bodies and/or other governments to participate in the enquiry.
- 4.4 The HRD and/or the Government of Belgium should immediately prohibit the processing of all diamonds that are said to be of Liberian and Ivory Coast origin.
- 4.5 As a matter of urgency, more rigorous oversight on the issue of origin must be instituted by the HRD and the Government of Belgium.
- 4.6 The Government of Belgium and the HRD should, as a matter of urgency, investigate the diamond 'fingerprinting' technology being developed by the Royal Canadian Mounted Police. The sooner this technology is in widespread use, the easier questions of identification will become.

Note: There is concern in Belgium that tougher controls would drive the diamond industry away to countries such as Israel, where oversight may be equally lax. This is not a good enough reason to ignore the Belgian problem, but it *is* a reason for rigorous international investigation of other diamond trading centres (see Recommendation 8).

5 Liberia and Ivory Coast

Liberia has become a major criminal entrepot for diamonds, guns, money laundering, terror and other forms of organized crime. The astoundingly high levels of its diamond exports bear no relationship to its own limited resource base. By accepting Liberian exports as legitimate, the international diamond industry actively colludes in crimes committed or permitted by the Liberian government.

- 5.1 The United Nations Security Council should place a full embargo on the purchase of any diamonds originating in, or said to originate in Liberia until a full and objective international review can be carried out of the country's legitimate resource base, and until exports fall into line with that resource base.
- 5.2 The United Nations Security Council should place a full embargo on the purchase of any diamonds said to originate in Ivory Coast until a full review can be carried out of the country's legitimate resource base, and until exports fall into line with that resource base. Consideration should be given to imposing the same restrictions on Guinean diamonds.

6 Canada

As 'home' to a high proportion of the world's junior mining companies, Canada has a particular responsibility to ensure good corporate citizenship abroad. New standards and codes of conduct have been implemented by some companies and provincial securities commissions in recent years, but these are directed largely at matters of financial transparency, professional competence and issues dealing with capitalization. Some deal with environmental issues. They do not, however, deal with issues of corporate behavior in war zones or with issues such as contravention of the International Convention Against the Recruitment, Use, Financing and Training of Mercenaries.¹²⁷

- 6.1 All Canadian securities commissions should initiate discussion among their members about issues relating to corporate conduct in war zones, with special reference to direct or arm's length trade in weapons and materiel, involvement with individuals and companies recruited abroad to engage in hostilities in a third country, or the arrangement of mining concessions in return for protection of any sort. Guidelines dealing with such issues should be created or added to existing codes.¹²⁸
- 6.2 The Royal Canadian Mounted Police should be encouraged and supported in its development of diamond 'fingerprinting'. Efforts should be made to develop systems for adopting the technology as a matter of course in diamond producing countries and in major trading centres around the world, including the CSO and Antwerp.

7 A Consumer Campaign

Like diamonds, the Atlantic slave trade essentially served non-African markets. And like the diamond trade, the impact of slavery was devastating for many West African countries: it spawned predatory bandit groups acting like the RUF, UNITA and the NPFL, and mercenary regimes based entirely on violence and slave raiding. These regimes and bandit groups were sustained and motivated by the slave trade - by the arms and other resources they received for selling captive human beings to Europeans. With the end of the Atlantic slave trade, however, they collapsed or were swept aside in short order. The abolition of the slave trade was significantly influenced by a consumer campaign in Britain, aimed at the products of slave labour - mainly sugar from the Caribbean. The political and commercial damage to the slave trade of such campaigns was as much responsible for abolition as the humanitarian imperative.

At the bottom of the UNDP Human Development Index and wracked by almost a decade of war, Sierra Leone could not possibly be in worse condition today than if it never had any diamonds. Diamonds have, in fact, been a curse, not a blessing. This does not have to be the case, but concerted action on all the recommendations above will be necessary just to *start* making a difference. The recommendations will not be easy to implement, nor will they be cost-free. The easiest thing for the major actors - De Beers, the HRD, the Governments of Belgium and Sierra Leone, the UN Security Council - will be to do as little as possible.

One way of drawing greater attention to the urgency of the matter and of gaining broader support for change, would be a consumer campaign, One has already been started in Europe* and it would not be difficult to expand it. Imagine:

- Diamonds are *not* a girl's best friend - witness the brutalized little girl (pictured on the cover of this report) with no hands;
- 'The millennium gift she'll never forget' - ditto;
- For some people, diamonds are more 'forever' than for others - witness 75,000 violent deaths in Sierra Leone;
- Diamonds are a guerilla's best friend - witness Sierra Leone's coups, rampaging criminals, etc etc

Sixty million individual pieces of diamond jewelry are sold every year, indicating a sizeable target audience.

The Project Team understands that an effective consumer campaign could inflict damage on an industry which is important to developing economies and to poor people working in the diamond industries of other countries such as Namibia, South Africa, India and Botswana. Those considering the possibility of initiating or joining a campaign, therefore, would have to consider how many lives in countries like Sierra Leone, Angola and the Congo these jobs are worth. Speaking in November 1999, Nicky Oppenheimer said,

Damage to the diamond market will not on its own deprive the warlords of their treasuries, but it will kill prosperity and encourage poverty in other well regulated African countries and in the cutting centres of India and around the world... Indeed, damage the market and you undermine orderly mining regimes and ensure instead that there will be more Angolas, more Congos, more Sierra Leones. It could ensure that there will be no more Botswanas, South Africas or Namibias.¹²⁹

Diamond analyst Martin Rapaport, while critical of the UN, Global Witness and what he sees as hypocritical politicians and bureaucrats, fears a consumer campaign, but understands that it could hurt. 'The bottom line,' he says, 'is that the diamond industry does not need or want conflict with government or NGOs. It is in our economic interest to cooperate and find reasonable and responsible ways to deal with war diamonds.' He says that 'from a humanitarian and moral perspective, our industry must do everything it reasonably can to ensure that diamond money is not used to fuel conflict... As an industry we must take responsibility for our actions and develop trade-wide practices that we believe are correct and moral.'¹³⁰ Nelson Mandela has said the same thing: 'We would be concerned that an international campaign... does not damage this vital industry. Rather than boycotts being instituted, it is preferable that through our own initiatives the industry takes a progressive stance on human rights issues.'¹³¹

The word 'boycott' is increasingly being used within the diamond industry. This report does not use the word. The point of a *campaign* would be to create greater interest among the public,

* By the NGO, Global Witness - URL: www.oneworld.org/globalwitness

public institutions and within the diamond industry in doing exactly what Mr. Mandela suggests. In fact an informal campaign appears to be well under way, and this report takes its place as part of it. Where people's lives are concerned - as they are in Sierra Leone - time is of the essence. In the absence of clear and meaningful movement, the point of a campaign would be to help the industry 'take responsibility for its actions' - not damaging it, but improving it.

8 Further Study

This report has not dealt with the problems of Angolan or Congolese diamonds and their relationship to other countries in the region. Angola's problems - which are similar to those of Sierra Leone - were under consideration by a United Nations panel of experts when this report was being finalized. Recommendations emerging from that panel will no doubt need to be considered in relation to what has been recommended here.

This report has also not addressed the diamond trade in other parts of the world, most notably in Russia, Ukraine, New York, Israel and India. Further solutions to some of the problems identified here might follow additional research into these and other trading, cutting and polishing centres.

ANNEX 1

A NOTE ON CANADIAN JUNIOR MINING COMPANIES¹³²

It is not a coincidence that so many junior mining companies incorporate themselves in Canada and are listed on Canadian stock exchanges. A combination of Canadian tax provisions, the operation of the Canadian stock exchanges and Canada's own resource history has made Canada the premier country for mining company venture capital.

Part of this is explained by history. With an abundance and variety of mineral resources, much of Canada's development has been based on extractive industries. Consequently, Canada has high levels of expertise in mining, a large number of exceptional mining geologists, and an abundance of skilled penny stock promoters, sometimes called 'the bottom feeders of the mining business.'¹³³ The country also has a population with a penchant for penny stocks. Mining is a risky business and the probability of striking it rich is slim. Only one in 10,000 exploration companies will find and bring a mine into production. Because of the high risk, and the low level of capitalization by most mining companies, Canadian Stock Exchanges have traditionally been easier to access because of less restrictive disclosure requirements and lower capitalization requirements than exchanges in many other countries. The Vancouver and Calgary exchanges (merged in November 1999 as part of a new Canadian Venture Exchange) were long known as mining exchanges, and sometimes as 'wildcat' exchanges.

This helps to explain why so many non-Canadian junior mining firms are 'officially' located in Canada, with listings on Canadian exchanges. During 1996, the amount raised to finance the domestic and foreign projects of Canadian mining companies - C \$7 billion (almost US\$5 billion) - was an all-time record. Of this, C \$5.5 billion was in the form of equity and C \$1.3 billion was in the form of debt. The amount of equity financing for mining during 1996 accounted for about one quarter of all Canadian-dollar equity issues raised in Canada. In the case of debt, however, mining accounted for less than five per cent. In 1996, more Canadian-dollar and foreign-currency equity financing was raised for the mining industry than for any other industry. In fact, the Canadian financial services sector appears to have raised more equity capital for the mineral industry than was raised in Australia, the United States and South Africa combined.¹³⁴

In 1996, more than 39 billion shares of all types of companies were traded on Canadian exchanges, with a value of C\$369 billion. At the end of 1996, there were about 1400 mining companies listed on Canadian stock exchanges. More than 800 companies were listed on the Vancouver Stock Exchange (VSE), about 300 on the Toronto Stock Exchange and the remainder were listed on the Alberta Stock Exchange (ASE) and the Montreal Exchange (ME). Mining companies accounted for more than half of the companies listed on the VSE. In addition to the four stock exchanges, Canada also had a negotiated dealer market, the Canadian Dealing Network, that provided a market for the shares of unlisted mining companies. There were more than 150 mining companies trading on the Canadian Dealing Network (also merged mainly with the Canadian Venture Exchange in November and December, 1999).¹³⁵

Another characteristic of Canadian markets over the past decade has been the increasing number of foreign-based mining companies listed on Canadian exchanges. During 1996 at least eight mining companies with headquarters located outside of Canada were listed on the TSE alone. The increase in foreign listings is attributable, in part, to the large pool of capital available in Canada, to the liquidity made available to investors by Canadian stock exchanges, and to the visibility given to mining companies by Canadian mining analysts.

Over the years, there have been various Canadian mining scandals. In virtually all of Canada's mining scams, the final 'blame' has been laid on stock promoters and the 'flexibility' of the stock exchanges. The Bre-X scandal was perhaps the worst: a phoney gold mine in Indonesia was capitalized to the tune of C\$6 billion before its sudden and well-deserved crash in 1997. The fallout from Bre-X was significant. The remarkable bull market that propelled penny stocks into the big leagues ended. In 1997, 30 per cent of Canada's biggest stock market losers were junior mining companies. The TSE's gold and precious metals subindex, which lists the sector's 'best' performers, dropped almost 40 per cent in the same year, the worst showing among all fourteen of the TSE's subgroups. By contrast, the TSE's financial services subindex, which includes the nation's largest major banks and brokerages, was up nearly 52 per cent.¹³⁶ For the juniors, the 'market dried up.'¹³⁷

In addition to the past attractiveness of Canadian exchanges, there are a number of tax regulations that facilitate Canadian investment abroad, some of which apply specifically to the mining industry:

- Canadian tax law allows the deductibility of interest incurred by borrowing, whether in Canada or offshore, for investment in foreign subsidiaries, while intercorporate dividends are exempt from Canadian income tax.;
- Profits generated by subsidiaries operating in a country with which Canada has a tax treaty can be repatriated free of Canadian income tax;
- Canadian companies that invest directly in foreign mining projects and incur exploration and development expenses can deduct, under certain conditions, deduct up to 100 per cent of these expenses.
- Canadian tax regulations allow the pooling of exploration and development expenses, rather than requiring property-by-property or country-by-country accounting. As a result, proceeds from the sale of foreign resource properties can be sheltered against Canadian tax by the total amount of unclaimed foreign exploration and development expenses.

A positive outcome of Bre-X scandal was a tightening up of Canadian exchanges, with changes that could make life more difficult for unethical junior mining companies. The merger of the Calgary and Vancouver exchanges brings the industry under tighter scrutiny than before. The TSE is drafting new regulations which are part of the restructuring. Proposed changes include the following:

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- Resource companies trading on the TSE will be expected to boost minimum exploration or development budgets by \$100,000, to \$350,000, and record sales of at least \$3 million, up from \$1 million;
 - Companies will be bound by stricter disclosure requirements, as recommended in 1999 by a Mining Standards Task Force;
 - Companies also must now have a minimum market capitalization of \$3 million, with publicly floated shares valued at at least \$2 million. They must also be in control of assets worth a minimum of \$3 million, up from \$2 million, and have revenues of at least \$3 million, up from \$1 million;

Companies that do not conform to the new requirements will be given 120 days to do so, and the market will be given 30 days notice of pending suspensions.¹³⁸

ANNEX 2

DIAMOND PROPERTIES HELD IN SIERRA LEONE BY INTERNATIONAL MINING COMPANIES

(Mid 1999)

AMCAN MINERALS LIMITED

River Lots: The company has 12 river lots on the Sewa River (alluvial).

Old River Terraces: AmCan has three 144-acre lots in this main alluvial diamond fairway. The lots are numbered 106, 107 and 108 and are immediately southwest of the Koidu Kimberlite project.

Hard Rock Kimberlite Dykes: AmCan holds an exploration license (No. Expl. 4 1998) for blocks 51 and 51A, along with kimberlite pipe No. 3 and all surrounding dykes. Blocks 51 and 51A are immediately northeast and contiguous with the Koidu Kimberlite Project, which is controlled by DiamondWorks. The total land area covers an area of approximately 20.7 square kilometres and is in Kono District. The surrounding dykes cover a distance of 27 miles in length, the widest of which is eight metres. The license was granted by the Ministry of Mineral Resources of Sierra Leone in 1996.

AmCan, through its subsidiary Sierra Gold Limited also holds a 90 per cent interest in a 30 sq. mile gold property on the Pampana River in the Tonkalili District of central Sierra Leone. The property is situated in the middle of the Sula Mountain Archean Greenstone Belt. In 1998, the exploration license for the property was renewed by the Government of Sierra Leone for a period of three years.

REX DIAMOND MINING CORPORATION

The Ministry of Mineral Resources of Sierra Leone reconfirmed title of Rex's diamond concessions on August 18, 1999. Rex titles are in Tongo Field and Zimmi Fields.

Tongo Field: The Tongo Field property comprises approximately 65 square kilometers, located in Kenema District and was originally granted to REX by the Government of Sierra Leone on 15 March 1994. The mining rights are held by Rex NV pursuant to lease ML 10/94, and expires on February 28, 2019. The Rex property has been previously mined for alluvial diamonds. Four Kimberlite dyke zones have been discovered on the property.

Zimmi: The Zimmi Property consists of approximately 54 square kilometers located in Pujehun District. The property is held pursuant to lease ML 9/94, which expires February 28, 2019. The Zimmi property is an alluvial diamond property, which was developed for mining during the mid-1980s. The property was abandoned before commencement of full-scale mining because of civil unrest. Company geological reports based upon sampling programs carried out on the property

indicate that the property contains deposits of large stones of high quality. Rex believes that the Zimmi property has the potential to produce alluvial diamonds at surface and that high-grade paleo channels and other geophysical features indicate the possibility of kimberlite.

DIAMONDWORKS LTD.

Koidu Property: DiamondWorks has a 25-year renewable mining lease which grants the company the exclusive right to carry out exploration and mining activities in respect of diamonds, gold and associated minerals in an area of approximately four square kilometres in the Kono District known as the Koidu Property.

Area 7 Property: DiamondWorks has a 3-year prospecting license that covers an area of approximately 93 hectares in the Kono District known as Area 7.

Matemu Property: DiamondWorks has a 3-year prospecting license for kimberlite diamonds covering an area of approximately 68 square kilometres in southeastern Sierra Leone. DiamondWorks is required by the Government of Sierra Leone to spend US\$ 340,000 on exploration on the property during the first two years of the license.

Sources: Company Annual Reports and submissions to the Ontario Securities Commissions (www.sedar.com)

ANNEX 3

LIST OF INDIVIDUALS INTERVIEWED

SIERRA LEONE

Government

- ▶ Desmond Luke, Chief Justice
- ▶ Dr. Sama Banya, Sierra Leone Minister of Foreign Affairs and International Cooperation (interviewed in Canada)
- ▶ Mohamed Swaray Deen, Minister of Mineral Resources
- ▶ Julius Spencer, Minister of Information, Broadcasting and Culture
- ▶ Hinga Norman, Deputy Minister of Defence
- ▶ David Quee, Chairman, Government Gold and Diamond Office (GGDO)
- ▶ Osman Kamara, Deputy Mineral Resources Director
- ▶ A. Yumkella, Deputy Minister of Mines
- ▶ Femi Kamara, Mines Engineer
- ▶ Andrew Keilli, Senior Mines Engineer
- ▶ Arnold Mason, Geologist, Mineral Resources Ministry
- ▶ Lamin Massaquoi, Senior Geologist, Mineral Resources Ministry

Other

- ▶ Alfred Akibo-Betts, businessman, former Minister of Fisheries and former Mayor of Freetown
- ▶ Amadu Amara, Chief Clerk, Kamajor 19th battalion, Bo
- ▶ Simon Arthy, Regional Coordinator for the EC Resettlement Program (ECSLP), Bo
- ▶ Mohammed Hassan Barrie, President, United Mineworkers Union
- ▶ Steven Crossman, Deputy High Commissioner for Great Britain
- ▶ Pios Foray, editor, *Democrat*
- ▶ Francis Fortune, Conciliation Resources, Bo
- ▶ Martin Kallon, senior Kamajor intelligence officer, Bo
- ▶ John Kanagbo, diamond dealer, Bo
- ▶ Francis Kpullum, diamond dealer, Bo
- ▶ Kingsley Lington, editor, *Concord Times*
- ▶ Rodney Michaels, diamond dealer, Bo
- ▶ Phillip Neville, editor, *Standard Times*
- ▶ Patrick Sannoh, ex-miner, Bo

And many other persons, mainly illicit miners and dealers who asked not to be named.

CANADA

Government

- ▶ David Angel, First Secretary, Political Affairs, Permanent Mission of Canada to the UN
- ▶ D.J. Ballantyne, Central Forensic Laboratory, Royal Canadian Mounted Police, Ottawa
- ▶ Sgt. Ray Halwas, NCO in Charge, "G" Division Diamond Project, Yellowknife, NT
- ▶ T.S.E. Jones, Eastern and Southern Africa Division (GAA), Department of Foreign Affairs and International Trade
- ▶ Gerry Olson, Office of the Privy Council, Ottawa
- ▶ Douglas Paget, Chief of Special Projects, Mineral Resources/Natural Resources and Environment Department of Indian Affairs and Northern Development

Private Sector

- ▶ J.S. Austin, President and CEO, Aston Mining of Canada Inc., Vancouver B.C.
- ▶ Terry Buckham, Diamond High Council (HRD), Toronto, Ontario
- ▶ George F.H. Burne, President & CEO, De Beers Canada Corporation, Vancouver
- ▶ Tom Beardmore-Gray, Senior Vice-President, De Beers Canada Corporation, Vancouver
- ▶ Alan McCaffrey, Vice-President for Public Relations, AMCAN Minerals, Ltd., Toronto
- ▶ Peter Meredith, Chief Financial Officer, DiamondWorks Ltd., Vancouver
- ▶ E.J. Oosterhuis, Investor Relations, CEF, Toronto
- ▶ Adolf Petancic, Investor Relations, Dentonia Resources Ltd., Vancouver, B.C.
- ▶ Bill Trenaman, Vice-President, DiamondWorks, Ltd., Vancouver, B.C.

Other

- ▶ John Leigh, High Commissioner of Sierra Leone to Canada and Ambassador to the United States
- ▶ Prof. Bonnie Campbell, Université du Québec à Montréal
- ▶ Gen. Ian Douglas (Ret.), Independent Consultant, Kanata, Ontario
- ▶ Howard Goldenpaul, Producer, CBC *Fifth Estate* television program, Toronto
- ▶ Joan Kuyek, National Coordinator, MiningWatch Canada, Ottawa
- ▶ Professor A.A. Levinson, Department of Geology and Geophysics, University of Calgary

UNITED KINGDOM

- ▶ T.W.H. Capon, Executive Director of Central Selling Organization and Member Board of Directors, De Beers
- ▶ Kaspar Fithen, Oxford Analytica, Oxford
- ▶ Charmian Gooch, Director, Global Witness, London
- ▶ David Lord, Conciliation Resources, London

- ▶ Alex Yearsley, Global Witness, London

BELGIUM

- ▶ Frieda Coosemans, Head of Diamonds Department, Ministry of Economic Affairs, Government of Belgium

A number of interviews took place with individuals who preferred to remain anonymous. They included officials in:

- ▶ The Ministry of Justice
- ▶ The Senate Commission on Organized Crime
- ▶ The Belgian Administration for Development Aid

Others

- ▶ Belgian Investigative Journalists
- ▶ Diamond Dealers and Traders
- ▶ Diamond Couriers and Smugglers
- ▶ Officials of the Diamond High Council (HRD) (Diamond Office and the Gemological Institute)

UNITED STATES

- ▶ E.J. Hogendoorn, Human Rights Watch, Washington, D.C.
- ▶ Professor Herb Howe, Georgetown University, Washington, DC
- ▶ Danny Kennedy, Project Underground, California
- ▶ Prof. William Reno, Northwestern University, Michigan
- ▶ Jim Rupert, *Washington Post*, Washington, DC
- ▶ Rachel Stohl, Center for Defence Information, Washington D.C.

GHANA

- ▶ Yao Graham, Third World Network (Africa Secretariat), Accra, Ghana
- ▶ David Tam-Baryoh, West African Media Watch, former editor of *Punch* (Freetown)

NOTES

1. Gordon, Christine, 'Rebels' Best Friend', BBC *Focus On Africa* magazine, October-December 1999
2. See, for example, Paul Richards, 'Rambo and war in Africa', *Crosslines*, April-May 1995; and Paul Richards, *Fighting for the Rainforest: War, Youth and Resources in Sierra Leone*, International African Institute & James Currey, Oxford, 1996
3. See, for example, Ibrahim Abdullah, 'Bush Path to Destruction: The Origin and Character of the Revolutionary United Front'; Yusuf Bangura, 'Understanding the Political and Cultural Dynamics of the Sierra Leone War: A Critique of Paul Richards' *Fighting for the Rainforest*'; and I. Abdullah *et al.*, 'Lumpen Youth Culture and Political Violence: Sierra Leoneans Debate the RUF and the Civil War' in *Africa Development*, Vol. XXII, Nos. 3/4, 1997
4. Keen David, 'War as a Source of Losses and Gains', Queen Elizabeth House, Oxford, July 1995
5. See Robert Kaplan's 'The Coming Anarchy', *The Atlantic Monthly*, February 1994 and *The Ends of the Earth*, Random House, New York, 1996
6. 'Jump-starting the economy' is almost as common an expression as 'strengthening civil society'. The *DAC Guidelines on Conflict, Peace and Development Co-operation* observe that 'The need to preserve peace and stability, rehabilitate essential infrastructure, reform public institutions, jump-start the economy, and create employment opportunities places heavy demands on budgetary resources' (1997, 53). The World Bank's first priority in an integrated package of reconstruction assistance is to 'jump-start the economy through investment in key productive sectors' (*Framework for World Bank Involvement in Post-Conflict Reconstruction*, 1997, iii).
7. McNish, Jacquie, *The Big Score: Robert Friedland, Inco and the Voisey's Bay Hustle*, Doubleday Canada, Toronto, 1998, pg. 330.
8. Reno, William, 'Commercial Agendas in Civil Wars', mimeo, undated (ca. 1999). See also Christopher Clapham (ed.) *African Guerillas*, James Currey, Oxford, 1998; and Jean-François Bayart, Stephen Ellis and Béatrice Hibou, *The Criminalization of the State in Africa*, International African Institute and James Currey, Oxford, 1999
9. *ibid*
10. Friedman, Milton, 'Social Purpose of Business is to Increase its Profits', *New York Times Magazine*, Sept. 13, 1970.
11. Keen, *op cit*
12. Levinson, A., Gurney, J., Kirkley, M., 'Diamond Sources and production: Past, Present and Future', *Gems and Gemology*, Vol. 28, No. 4, Winter, 1992, p. 236
13. There are major difficulties in the comparability of diamond statistics, which will be discussed later in this report. However, at this point, an example is useful. For 1998 two separate sources give the diamond output of Sierra Leone as 500,000 carats (Terraconsult Consulting) and 104,000 carats (United States Geological Survey, Department of the Interior).
14. James Picton, 'African Diamond Production in the 21st Century'. Paper presented at the Gemological Institute of America International Gemological Symposium, (June 21-24 1999, San Diego, California). Also see; James Petra, 'Standard Equities' Analyses of World Diamond Production (1997)', in Luc Rombouts, 'The Mining and Exploration Scene', *Mining Journal* Vol. 331 No. 8505 (London November 6, 1998) p. 5. Also useful is Alfred Levinson, John Gurney, Melissa Kirkley, 'Diamond Sources and Production: Past, Present, and Future' in *Gems & Gemology* Vol. 28 No. 4, Winter 1992) pp. 234-252.
15. Interview with De Beers Canada, Vancouver on July 21, 1999

16. Most general statistics about diamond resources in this report are taken from the United States Geological Survey. USGS data is used because of its breadth and comparability even though, as noted elsewhere in this report and according to personal conversations with A.A. Levinson, a Canadian geologist, USGS data, especially for West African countries, 'are likely to be very, very wrong' (personal communication).
17. Van der Laan, H.L., *The Sierra Leone Diamonds: An Economic Study Covering the Years 1952-1961* (London, Oxford University Press 1965) P. 60.
18. Much of this section relies on an article by A.J.A. Janse, 'A History of Diamond Sources in Africa', *Gems & Gemology* (Vol. 32, No. 1, Spring 1996) pp. 2-30.
19. There are some costs of being labeled a monopoly. For example, De Beers cannot operate offices in the United States as its market structure would violate American anti-trust legislation. However, this is a small cost as De Beers has American companies that effectively represent their interests. Canadian combines legislation is more flexible. De Beers has an office in Vancouver, British Columbia.
20. De Beers, *A Diamond is Forever-1998 Annual Report*, p. 5.
21. For two detailed but quite different histories of the De Beers-Anglo American conglomerate see David Pallister, Sarah Stewart and Ian Lepper, *South Africa Inc.: The Oppenheimer Empire*, Yale University Press, New Haven and London 1987; and Duncan Innes, *Anglo America and the Rise of Modern South Africa*, Heinemann, London, 1984
22. Economic purists may not agree with the idea that De Beers is 'monopolistic'. In the economic sense of market structures, pure monopoly refers to a market structure characterized by one seller and many buyers. De Beers also does not fit the definition of 'oligopoly' - a structure characterized by few sellers and many buyers. The market structure that De Beers has created is unique, and does not fit traditional economic categories. A firm that produces 50 per cent of world output, and controls the sale of 70-80 per cent of world output to a specially chosen group of 160 people, at prices it alone determines, exerts a massive amount of power over the market place and certainly has monopolistic characteristics.
23. Oppenheimer, Harry, 'De Beers and the Diamond Industry', January 1998, p. 31.
24. De Beers, 'De Beers and the Diamond Industry', January 1998, p. 14
25. De Beers, *1998 Annual Report*, p. 3.
26. Brenden Ryan quoting De Beers geology manager Roy Edwards in: 'Attracting Mining Minnows: Getting Into Bed with De Beers... who Gets the Best Night's Rest?' (<http://www.edata.co.za/debeers/fm6.html>) p.3
27. Ryan, *op cit*, p. 3.
28. Atkinson, Dan, 'De Beers Faces World Revolt', in *Electronic Mail & Guardian*, Johannesburg, South Africa, September 30, 1997, p.1 (www.mg.co.za/mg/news/97sep2/30sep-diamonds)
29. Kennedy, Peter, 'Tiffany Snags Aber Stake' in the *Globe and Mail*, July 20 1999.
30. It is unclear whether De Beers still holds offshore concessions in Sierra Leone.
31. T.W.H. Capon, Member of De Beers Board of Directors and an Executive Director of the Central Selling Organization, Interview, London, July 16, 1999.
32. De Beers, *1998 Annual Report*, p. 103
33. A De Beers's official quoted in *A Rough Trade: The Role of Companies and Governments in the Angola Conflict*, Global Witness, London, 1999, p. 6.
34. Title of Public Relations Brochure published by the Diamond High Council (Hoge Raad Voor Diamant Vzw), 1999.
35. Diamond High Council, *1998 Annual Report*, Antwerp 1999, p. 5
36. *ibid.* p. 11
37. Luc Rombouts, 'Antwerp the World's Marketplace for Diamond Producers' in *Antwerp Facets* (Diamond High Council, April 1999) #31, pp. 10-11.

38. Conversation with Diamond High Council spokesperson, September 2, 1999.
39. Sénat de Belgique, Session de 1998-1999, 8 Décembre 1998. Commission Parlementaire chargée d'enquêter sur la Criminalité Organisée en Belgique. Rapport Final fait par MM. Coverliers et Desmedt. (Chapter IV of the Report of the Parliamentary Commission of Inquiry into Crime includes 30 pages on the Diamond Industry.)
40. *ibid.* pp. 249-252
41. *ibid.* pp. 249-252
42. Interview with Antwerp police official.
43. Confidential interview with African diamond courier. Antwerp, September 24, 1999.
44. The quotation is from a novel by a Belgian novelist, Jef Geeraerts: *Diamant* (Meulenhoff/Manteau, Amsterdam/Antwerpen) 1981.
45. The project team was informed by a Canadian geologist specializing in the collection and analysis of diamond statistics that even the 200,000 carats listed as being produced in Liberia was a gross exaggeration. Personal communications with A.A. Levinson, University of Calgary.
46. Repeated written requests from the Project Team to the HRD in Toronto and Antwerp for information on the discrepancy between Liberian export figures and Belgian import figures remained unanswered.
47. For additional data and information regarding this issue, see the *Economist* Economic Intelligence Unit, *Country Reports for Sierra Leone, Liberia, Guinea* (London) for any of the years from 1993 to the present. Additional sources are: *Minerals Yearbook* (U.S. Department of the Interior – Geological Survey, Washington D.C). For a historical view from antiquity to 1996 see: A.J.A. Janse, 'A History of Diamond Sources in Africa: Part II' in *Gems & Gemology*, Volume 32 No. 1, 1992, pp. 2-31. Additional historical data can be found in: *Canada Minerals Yearbook* (Minerals and Metal Sector-Natural Resources Canada) and Alfred A. Levinson, John J. Gurney, Melissa B. Kirkley, 'Diamond Sources and Production: Past, Present, and Future' in *Gems & Gemology*, Volume 28 No 4, 1992, pp. 234-254
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50. Arrêté ministériel réglant les modalités de l'épreuve d'aptitude des experts chargés de constater le poids, la valeur et la qualification des diamants à l'importation et à l'exportation. *Moniteur Belge*, (The Belgian Government Gazette), 23 March 1990.
51. Confidential interview with a Belgian agent working on behalf of the Ministry of Justice and investigating crime and terrorist connections in Antwerp.
52. Van Baelen, J., 'Expert Diamond Office leerde frauderen in Twee Maanden Tijd in *Gazet van Antwerpen*, 22 April 1999
53. 'Diamantairs beperken voorraden in België', *Financieel Economische Tijd*, Oct. 18, 1997; 'De Verloren eer van de Antwerpse diamant', *Financieel Economische Tijd*, Nov. 26, 1997
54. The discussion of the mechanics of the Bourse is based on documentation obtained from the HRD in Antwerp in August 1999.
55. Allain Lallemand, *De Organizatsiya: De Russische Maffia van Antwerpen tot Brooklyn*. Berchem/Antwerpen, EPO, 1996, P. 308. (Originally published under the title: *L'organizatsiya: la mafia russe a l'assaut du monde* (Paris, Editions Calmann-Levy, October 1996). Also, personal conversations were held with Lallemand in Brussels in April and June 1999.
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63. *ibid*
64. Koskoff, *op cit*, pp. 87-93
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108. Phone interview with E. Allan McCaffrey, Vice President, Public Relations of AmCan Minerals Limited. October 14, 1999.
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110. Interview with senior DiamondWorks personnel, Vancouver, July 21, 1999
111. Much of the information on Carson Gold and its transformation into DiamondWorks comes from: Will Purcell, 'A Rocky Past, A Hopeful Future' (www.siliconinvestor.com/stocktalk/msg.gsp?msgid=10955815) August 14, 1999.
112. This information comes from a one-page summary found on: <http://mbendi.co.za/orgs/cbh2.htm>.
113. The examples are taken from, 'Statement & Media Advisory', DiamondWorks, www.diamondworks.com/sBackground.asp) June 10, 1999
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115. DiamondWorks, Ltd., *1998 Annual Report*, p. 16
116. *ibid*, p. 17
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118. For more on the system, see Alfred Zack-Williams, *Tributors, Supporters and Merchant Capital: Mining and Underdevelopment in Sierra Leone*, Ashgate, Aldershot, 1994
119. For example a company with South African connections, Igoli Mining, has recently begun operations in the Pujehun area. Security is being provided by Kamajors, with weapons reportedly purchased from ECOMOG.
120. Van der Laan, *op cit*, pp. 6-7
121. Letter from De Beers Managing Director Gary Ralfe to the United Nations Sanctions Committee, January 13, 1999, *Angola Unravels: The Rise and Fall of the Lusaka Peace Process*, Human Rights Watch, Washington, September 1999, pp. 138-139.
122. De Beers, 'Introduction to the Sources of Rough Diamond Production and their Individual Characteristics', London, June 1999, quoted in *Angola Unravels: The Rise and Fall of the Lusaka Peace Process*, Human Rights Watch, Washington, September 1999, pp. 139-140.
123. Project Team discussions and communications with: D.J. Ballantyne, Chemistry Section – Central Forensic Laboratory (RCMP) and Sgt. Ray Halwas, NCO in Charge, 'G' Division Diamond Project (RCMP)
124. Communication from Sgt. Ray Halwas, NCO in Charge, 'G' Division Diamond Project (RCMP) October 20, 1999.
125. 'Consumer Access to a Responsible Accounting of Trade Act of 2000 (Introduced in the House)', 106th Congress, House of Representatives, Nov. 1, 1999
126. 'Floor Statement of U.S. Rep. Tony P. Hall', US House of Representatives, Nov. 1, 1999
127. This Convention was passed by the United Nations General Assembly after ten years of debate and negotiation in 1989. It was to enter into force one month after it had been ratified by 22 states. By the end of 1997, it had been ratified by only seven.
128. This is a complex issue, made more difficult by the fact that as many as one third of 'Canadian' mining companies are based outside Canada. One way of looking at it has to do with shareholder protection. Mining



firms are expected to apply due diligence to technical matters in the interest of their shareholders. Lack of diligence in political, military and ethical matters overseas can place shareholder investment at risk. The Alliance of Manufacturers and Exporters Canada makes a reasonable start at such issues with its 'Good Corporate Conduct Abroad'. The issue, however, is not codes, but how to give them teeth.

129. Oppenheimer, Nicky, 'Diamonds Working for Africa', Speech to the Commonwealth Business Forum, Johannesburg, Nov. 11, 1999

130. Rapaport, Martin, 'Blood Money', Nov. 11, 1999, Diamond Net, URL: www.diamonds.net/news

131. *IRIN Newsbriefs*, UN Office for the Coordination of Humanitarian Affairs, 17 November, 1999

132. This section draws on the research of Bonnie Campbell. In particular see, Bonnie Campbell, 'Canadian Mining Interests and Human Rights in Africa in the Context of Globalization', Occasional Papers, International Centre for Human Rights and Democratic Development, Montreal, January 1999.

133. Francis, *op cit*

134. Campbell, *op cit*, p. 11.

135. *ibid*

136. Hutchinson, Brian, *Fools Gold: The Making of a Global Market Fraud*, Alfred A. Knopf Canada, Toronto, 1998, p. 250

137. Interview with Peter Meredith, Chief Financial Officer of DiamondWorks, Vancouver, July 21, 1999.

138. 'TSE Introduces Stricter Listing Requirements', *Northern Miner*, Vol. 85, #33, October 11-17 1999, p.5.

C I R D A P

The Centre on Integrated Rural Development for Asia and the Pacific (CIRDAP) is a regional, inter-governmental, autonomous institution, established in July 1979 at the initiative of the countries of the Asia-Pacific Region and the Food and Agriculture Organization (FAO) of the United Nations with support from several other UN bodies and donors. Its member countries include Afghanistan, Bangladesh (Host State), India, Indonesia, Lao PDR, Malaysia, Myanmar, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand and Vietnam.

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